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EDITOR'S COMMENTS

THIS issue of the *Neptune* represents an interesting mix of articles. We begin with Ralph Dexter's delightful account of the sightings of sea serpents off Cape Ann over a period of some 250 years in a piece entitled 'Cape Ann Visits of the Great Sea-Serpent' (1639-1886). Then our next three articles are concerned essentially with American naval matters from Colonial times to the present day. The first of these by R. J. B. Knight, entitled 'New England Forests and British Seapower: Albion Revised,' provided us with a very different view of the importance of New England masts to the Royal Navy during the late eighteenth century than that to be found in Albion's classic *Forest and Seapower*. A second by Robert W. Randall, entitled 'Captains and Diplomats, Americans in the Río de la Plata, 1843-1846,' explains how American seapower and diplomacy affected this remote part of South America in the decades immediately preceding our Civil War. And the last of these naval articles, 'They Were a Class Apart: The Story of Life Aboard One of the Four-Stack Flush Deck Destroyers in the Years Between the Two World Wars,' tells us of the special sailors who manned our destroyers between World War I and II.

Then our mood changes. A brief but important offering by Stuart Frank called '*Moby-Dick:* The Two "Missing" Prints by "H. Durand" ' explains how these illustrations for the original volume of Melville's classic were lost and recovered. And finally we have Deborah Jean Warner's 'At the Sign of the Quadrant—The Navigational Instrument Business in America to the Civil War.' This article explores this little known aspect of American maritime history, which was so important to the growth of American shipping in its great age of sail when Maury and Bowditch were setting the pattern for its oceanic history.

We then complete the volume with a section which lists some of the more important meetings of maritime historians during the year of 1986-87 and one on important maritime exhibits in North American museums and finally a number of book reviews and the year-end index.

As a final word I would like to mention that the Peabody Museum of Salem will soon open a new permanent exhibition dedicated to Salem's shipping with a wider world overseas.

ARCHIBALD R. LEWIS

Salem, Massachusetts

Cape Ann Visits of the Great Sea-Serpent (1639-1886)

Ralph W. Dexter

SEA-SERPENTS, more properly called sea-monsters, have been reported from antiquity to the present time. The first record of the great sea-serpent on Cape Ann goes back to John Josselyn's 'An Account of Two Voyages to New England' (1674) in which he related an incident told to him in 1639. Josselyn wrote, 'They told me of a sea-serpent or snake, that lay coiled upon a rock at Cape Ann; a boat passing by with Englishmen on board, and two Indians; they would have shot the serpent, but the Indians warned them, saying that if he were not killed outright, they would all be in danger of their lives.'[1] This incident was also recorded by Obadiah Turner 5 September 1641 when he described a sea-serpent off the shores of nearby Lynn. He wrote, according to Obadiah Oldpath,[2] 'We have likewise heard at Cape Ann the people have seen a monster like unto this which did there come out of the sea and coil himself upon the land.' It was nearly 200 years before another record was made. In the late summer of 1817 many reliable persons on Cape Ann got to witness visits of the great sea-serpent. The first sighting took place about 6 August. S. G. Perkins, a merchant of Boston, wrote to his friend Edward Everett in Paris on 20 August 1817 that some two weeks earlier two women living near the entrance to Gloucester Harbor saw the sea-serpent coming into the harbor, which was confirmed by several fishermen. They estimated it to be from 50 to 100 feet long, as round as a barrel, with a series of bunches on the back. The motion was rapid, producing a wake, and daily visits were made while apparently pursuing a run of herring. Col. Thomas H. Perkins, brother of the letter writer, was among the witnesses, as was the famous Daniel Webster.[3] From this time on, many sightings were made, and some of them were recorded for posterity. Many people thought at first these two women were misled by a line of porpoises or sharks following each other in a train. This still remains one possible explanation for some reports of sea-serpents, but in this case many subsequent and independent observations were made.

At a meeting of the Linnaean Society of New England 18 August 1817 held at Boston, the Hon. Judge John Davis, noted botanist and physician Dr. Jacob Bigelow, and naturalist Francis C. Gray were appointed to collect available evidence which was eventually published by the society.[4] The committee members wrote to Hon. Lonson Nash of Gloucester, a justice of the peace who was one of the witnesses, requesting him to gather information on oath to be signed and certified according to specified rules. A list of 24 questions was supplied to Mr. Nash so that each interview would be uniform and as complete as possible. Eight depositions were obtained from reliable witnesses. Altogether, 51 accounts of the sea-serpent in Gloucester Harbor were assembled. Coincidentally, at the time of the visits, a deformed black snake with a series of 40 humps on its back was killed by a workman at Loblolly Cove, and this was thought by some to be the young of the sea-serpent. This specimen, about three feet long, was given the scientific name *Scoliophis atlanticus* as a new spe-

1. John Josselyn, *An Account of Two Voyages to New England* (Mass. Hist. Coll. 23 [1674], 228).

2. Obadiah Oldpath (pseudonym of J. R. Newhall), *Lin: or Notable People and Notable Things in the Early History of Lynn* (1890), 500 pp.

3. J. K. Rogers, 'Daniel Webster and Col. T. H. Perkins, a Summer-day Outing in 1817,' *New England Magazine*, 4 (Jan. 1886), 13-26.

4. John Davis, Jacob Bigelow, and F. C. Gray, 'Report of a Committee of the Linnaean Society of New England Relative to a Large Marine Animal Supposed to be a Serpent, Seen Near Cape Ann, Mass., in August, 1817' (Boston: Cummings and Hilliard), *Trans. Linnaean Soc. of New England* (1817), 52 pp.

cies and illustrated by Dr. Bigelow (actually it was a common black snake *Coluber constrictor* deformed by disease or injury—i.e. kertosis). It was some time before professional zoologists corrected this misinterpretation of a deformed snake as we shall see, but in fairness, it should be pointed out that the committee report did recognize that 'this animal approaches most nearly to the *Coluber constrictor*' (p. 40). It is unfortunate that the authors did not pursue this clue further. The thrill of making a great discovery blinded their better judgment and injured their own case to document the existence of a real sea-serpent. Thomas Helm pointed out that the Linnaean Society, being misled by the deformed snake, lost credence and consequently people lost faith in the Cape Ann reports.[5]

Following are excerpts from some of the eight depositions gathered by Mr. Nash and published by the Linnaean Society. Amos Story, a Gloucester mariner, observed 10 August 1817 what he believed to be a sea-serpent southeast of Ten Pound Island in Gloucester Harbor which he observed for 1.5 hours. His closest view was at a distance of some 20 rods (1 rod = 5.5 yards). It had a large head like a sea turtle held about a foot above water. Although he saw 10 to 12 feet of the body, no bunches were observed. It moved about a mile in some two to three minutes. Thirteen days later he saw it again while it was lying still on the surface, and with a spyglass (spotting scope) observed it for half an hour at a distance of about 40 rods. He saw about 50 feet of it, dark brown in color and thick as a man's body.

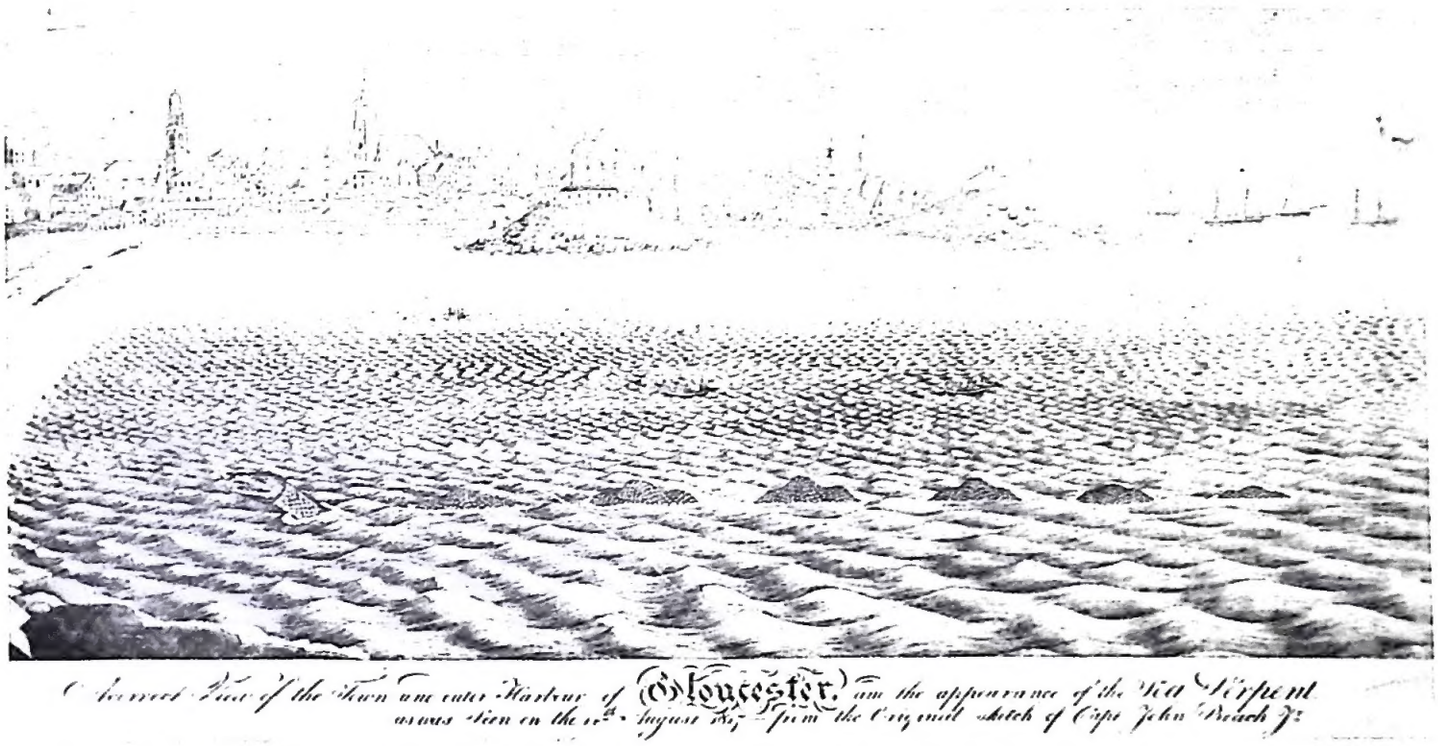
Solomon Allen III, a Gloucester shipmaster, saw the sea-serpent in Gloucester Harbor on 12, 13, and 14 August. He estimated the length to be 80 to 90 feet and the size of a half-barrel with bunches from head to tail. He was in a boat within 150 yards of the monster. The head resembled that of a rattlesnake, but nearly the size of the head of a horse. The motion was slow, sometimes going in circles. After sinking straight down it reappeared 200 yards away in two minutes. Mr. Allen estimated 50 bunches from 8 to 10 inches above the surface which moved sideways like a real serpent, whereas most people reported a vertical motion of the body. It was dark brown in color with rough and scaley appendages. The head was carried two feet above the water at times, but at the surface at other times. The mouth opened about 10 inches. Mr. Nash, who took the deposition, thought 50 bunches was an unreasonable number, that it was not scaley, and the motion was vertical rather than side-to-side like a snake. A. C. Oudemans, the great authority on sea-serpents, agreed with Nash on those points.[6]

Epes Ellery, another Gloucester shipmaster, also saw the sea-serpent in Gloucester Harbor on 14 August 1817. He estimated it was 150 fathoms away, and was observed through a spyglass. He saw about 40 feet of the animal with a body size of a two-gallon keg, and with bunches on the back, protruding above the water making a vertical motion. The same day William H. Foster, a Gloucester merchant, made about the same observations, but added that the animal made an abrupt turn like a staple (i.e., hair-pin turn). Three days later he saw it again through a spyglass. The head was the size of a man's head and a prong or spear one foot long and six inches in circumference arose from the head (Oudemans believed the 'prong' to be the tongue). Unlike Solomon Allen, Foster described the body as 'smooth.'

Matthew Gaffney, a ship carpenter from Gloucester, observed the sea-serpent on the same day, from a small boat, with which he was able to get within 30 feet of it. He also observed about 40 feet of the animal and estimated the body as round as a barrel with a head the size of a four-gallon keg. He agreed with the others the color was dark, but the underside was nearly white. When he shot at it with a musket it sank straight down, then reappeared unharmed 100 yards away. The motion was vertical and went a mile in two to three minutes. He also said it was smooth and made a sharp turn like a hair-pin. His statement was corroborated by his brother Daniel Gaffney. That same day Lonson Nash, the local justice of the peace, observed the creature for nearly half an hour with a spyglass and as close as 250 yards. He claimed no more than eight bunches on the back and believed the animal was actually straight, the bunches simply produced by the vertical motion of the body. He estimated the total length was 70 to 100 feet long, went a mile in four minutes, leaving a considerable wake, but with greater speed when swimming immersed. He, too, observed the hair-pin turns. The following day Joseph Lee, a fisherman of Manchester, saw the sea-serpent off Little Island (Kettle Island?) be-

5. Thomas Helm, *Monsters of the Deep* (New York: Dodd, Mead and Co., 1962), 232 pp.

6. A. C. Oudemans, *The Great Sea Serpent* (Leiden: E. J. Brill, 1892), 592 pp.



The Great Sea-Serpent as seen in Gloucester Harbor on 14 August 1817, sketched by Capt. John Beach, Jr., and based on eye-witness accounts. Many observers stood at the windmill seen in the background. (Photo copy by Mark Sexton. Courtesy of the Peabody Museum of Salem.)

tween Manchester and Gloucester. He drew a sketch of the animal, estimated to be about 100 feet long, now in the Manchester Historical Society and which was reproduced in 1979 for Essex County newspapers.[7]

Two days later a Gloucester youth, John Johnston, Jr., while passing from the shore to a vessel in Gloucester Harbor in a small boat, observed some 50 feet of the monster, but it was straight, without bunches. Capt. John Corlis and George Marble were also in the boat which got within two oars' length of the animal.

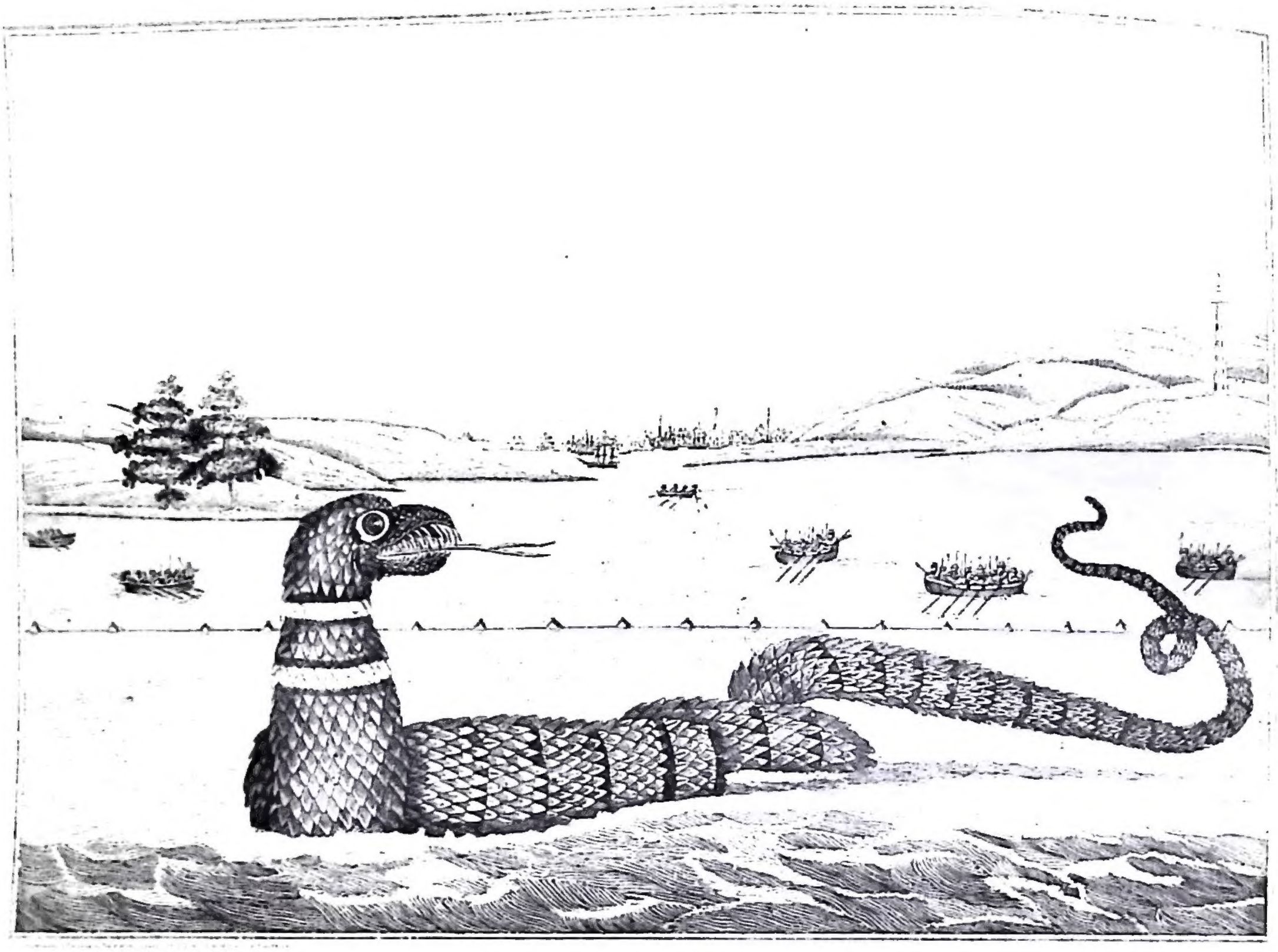
In addition to the eight depositions gathered and published by Lonson Nash, Capt. C. L. Sargent of the merchant marine, and a Gloucester resident, recorded testimony from 17 other citizens. His manuscript is in the archives of the Cape Ann Historical Association.[8]

Accordingly, on 10 August 1817 three witnesses made the following observations. Lydia Wonson saw the monster with a spyglass for nearly one hour between her house on Eastern Point and Ten Pound Island. It was 60 to 70 feet long resembling a series of buoys on a seine net (humps), formed a coil and then extended itself. The head was as large as that of a horse. William Row at a cove on Rocky Neck (Wonson's Cove?) saw the sea-serpent and two sharks come into the cove. He estimated the length to be 100 feet, it was in rapid motion, and when the head was above water, it was as broad as the head of a horse. Susan Stone observed the sea-serpent make a hair-pin turn and thought the head had the shape of a dog.

Twelve other persons described their experiences of 14 August when most of them were standing near the windmill on Fort Point at the eastern end of Pavilion Beach where they observed the sea-serpent between the beach and Stage Point (Stage Fort Park) on the opposite side of Gloucester Harbor. Three days later, two other witnesses made observations. William Saville,

7. Sally Gibson, 'Great Slithering Sea Serpents,' *North Shore* (Essex Co. newspapers), 14 July 1979, p. 10.

8. C. L. Sargent, 'The Sea-serpent—Evidence About It,' Ms. in archives, Cape Ann Historical Association (1817-1818). Scrapbook No. 15 on the sea-serpent, archives, Cape Ann Historical Association, Gloucester, Mass.



SEA SERPENT

This composite portrait, made from various eye-witness accounts, provides a close-up view of the sea-serpent in Gloucester Harbor, August 1817. (Photo copy by Mark Sexton. Courtesy of the Peabody Museum of Salem.)

standing near the windmill where so many people had caught sight of the sea-serpent earlier, saw 40 to 50 feet of it in distinct bunches, and Captain Corlis in a boat between the Fort and Ten Pound Island also saw some 40 feet of it from a distance of only 30 feet.

In the letter of S. G. Perkins to Edward Everett, mentioned earlier, it was further stated that the captain and crew of a vessel from Newfoundland Bank reported a sea-monster about 100 feet long off Cape Ann Harbor on 18 August. Also that day, William B. Pearson, another Gloucester merchant, while in a sailboat with James P. Collins saw the sea-serpent pass out of Webber's Cove and proceed toward Ten Pound Island. It was about 70 feet long with 10 to 12 bunches on the back, and once its head was raised slightly from the water. He agreed with other reports that it was as round as a half-barrel, dark brown in color, that it moved about a mile in three minutes with vertical motion, and that it made a sharp hair-pin turn. Perkins himself went to Cape Ann that day and observed the sea-serpent about one-eighth mile offshore.

A letter Colonel Perkins sent to John P. Cushing 13 October 1820, which was subsequently published in the *Boston Daily Advertiser* some years later (25 November 1848), described the visit of the sea-serpent to Gloucester Harbor 18 August 1817, and reported a conversa-

tion with a Mr. Mansfield who had previously been an unbeliever in the sea-serpent, but had seen it personally stretched out over a sandy beach in some 4 to 5 feet of water on 22 August 1817. He estimated the creature to be about 100 feet long.

Judge John Davis, senior author of the Linnaean committee report, wrote to Justice Lonson Nash 2 September 1817 that the last record of the sea-serpent to his knowledge was sighted off Eastern Point 28 August 1817 by Capt. Sewell Toppan and his crew on the schooner *Laura* as they were proceeding from Newburyport to Boston. Captain Toppan was becalmed about 9:00 A.M. on 28 August some two miles east of Eastern Point (near Brace's Cove) when he saw the sea-serpent some 40 feet away not far from shore-line. It had a body the size of a half-barrel and a head the size of a ten-gallon keg held slightly above the water. The motion was vertical and produced a large wake. Two of the crew members, Robert Bragg and William Somerby, estimated the speed at 12 to 14 miles per hour and observed the tongue which was thrust out for about two feet. Judge Davis then learned that Capt. Jack Beach possessed a drawing of the sea-serpent and asked Nash if this could be published with the committee report. Nash replied that Captain Beach had been in Boston recently and that an engraving was being prepared from his drawing (copies now widely distributed). The Nash compilation of depositions was widely accepted, and Prof. W. D. Peck, a naturalist at Harvard University, stated that it was 'very free from prejudice.'[9]

In July of 1818 the sea-serpent reappeared in Gloucester Harbor. On 25 July, William Sargent counted 32 humps. Four days later some fishermen pursued it with muskets, but without success. The following day Captain Webber and several whalers got within a few yards, but their harpoon bounced off the animal. On 12 August, Timothy Hodgkins, a local sailor returning from Newburyport, observed the sea-serpent in Annisquam Harbor. He estimated the length to be 120 feet and counted 20 humps five feet apart. The body size was equal to a 70-gallon cask with a head as big as a barrel. Four days later many persons saw it near Annisquam Lighthouse where it was pursued by a fleet of whaleboats.[10]

The Boston newspapers for 21 August 1818 announced the sighting of a sea-serpent near Boston and a reward of $5,000 offered for its capture dead or alive. Also, they gave an account of the experience of Capt. Richard Rich, a whaler from Boston, who went to Cape Ann in pursuit of the sea-serpent.[11] While at the mouth of 'Squam River off Annisquam on 20 August he reported, 'After several unsuccessful attempts, we have at length fastened to this strange thing called the sea-serpent. We struck him fairly, but the harpoon soon drew out.' A few hours later a similar attempt was unsuccessful. Samuel Dexter, whose brother William (one of my forebears) commanded one of the boats under Captain Rich, related how Captain Rich, in a whaleboat and with two smaller ones, 'chased him (the sea-serpent) about seven hours when they closed with him. He passed directly under the bow of Captain Rich's boat; he immediately threw the harpoon, which pierced him about two feet; he drew the boat a considerable distance, but went with such a velocity that he broke that part of the boat through which the rope passed and drew out the harpoon.' (Oudemans later pointed out that this was the only time the creature was actually struck with a harpoon.) The pursuers observed no scales or bunches on his back which had a smooth skin and an appearance like an eel. Later on, Captain Rich did succeed in making a capture, but it turned out to be a large tunafish, or horse mackerel. Many persons were disappointed with the result, some lost faith in a belief of sea-serpents, and some refused to believe Captain Rich captured the real animal reported from these waters as a 'sea-serpent.' Dr. Jacob Bigelow, the well-known physician and botanist of Boston, wrote, 'It is hoped that the unsuccessful termination of Captain Rich's cruise will not deter others from improving any further opportunities which may occur for solving what may now perhaps be considered the most interesting problem in the science of Natural History.'[12]

Two years later Col. T. H. Perkins wrote to John P. Cushing on 13 October 1820, in reference to the catch of Captain Rich, 'Those who had declared their disbelief of the existence of the sea-serpent, amongst others, were delighted to find their opinions were confirmed.'[13]

9. W. D. Peck, 'Some Observations on the Sea-serpent,' *Mem. Amer. Acad. Arts and Sci.* 4 (no. 1, 1818), 86-91.

10. C. L. Sargent, op. cit.

11. John Gordon, *A Collection of Scientific Articles and Newspaper Reports from 1816 to 1905 Relating to that Gigantic Aquatic Monster Known as the Sea-serpent* (Gordon Press, 1926), 67 pp.; A. C. Oudemans, op. cit., pp. 16-21, 198.

12. Jacob Bigelow, 'Documents and Remarks Respecting the Sea-serpent,' *Amer. Jour. Sci. and Arts* 2 (1820), 147-49.

13. *Boston Daily Advertiser*, 25 November 1848.

On the other hand, Prof. W. D. Peck, writing for the *American Academy of Arts and Sciences*, was among those convinced of the existence of a sea-serpent, and the *Quarterly Journal of Literature, Science, and the Arts* published in London (1818) concluded 'the existence of the animal is placed beyond doubt.' However, the famous American naturalist, Thomas Say, regretted that certain scientific journals in Europe took the story of the sea-serpent at Cape Ann seriously after Captain Rich brought in his tunafish.[14]

Andrews Norton, writing to a friend 11 September 1818, described the Cape Ann sea-serpent as 120 feet long and said the Gloucester Board of Health had sent two boats into Gloucester Harbor to intercept the sea-serpent. Prof. William D. Peck of Harvard University, a firm believer in the sea-serpent, was one of those who went in pursuit of it. However, he was among the first to declare the supposed *young* sea-serpent taken at Loblolly Point to be a diseased black snake, as did the French-American naturalist Alexander Lesueur. (In this they were correct as all zoologists have subsequently agreed.) Professor Peck was convinced that the true sea-serpent had no bunches, and the small snake collected at Loblolly Point simply had curvature of the spine, being in no way related to the sea-serpent. Another famous French-American naturalist Constantine Rafinesque rejected most claims of sea-serpents, but accepted the Cape Ann records and named the sea-serpent *Pelamis megophias*, as a real sea snake. This was typical of Rafinesque—naming animals he had never actually seen based upon reports by witnesses. He also stated that if the genus proved to be unique, the sea-serpent should be called *Megophias monsterosus.*[15]

Cheever Felch, a chaplain on the U.S. ship *Independence*, published the following account in 1820. In a small rowboat dispatched from the U.S. schooner *Science*, which was engaged in surveying Gloucester Harbor, they came abreast of Dolliver's Neck when William T. Melbourne, commander of the schooner, said, 'There is your sea-serpent!' It was some 35 yards away, immediately sank down and reappeared within some 20 yards. It then turned and headed for Ten Pound Island. It was observed for about one-half hour while passing between Ten Pound Island and Stage Point. About 100 feet of the creature were visible and it had 14 bunches about seven feet apart. It was dark brown in color, but white under the throat with a head three feet in circumference. Its swimming motion was both vertical (typical of sea-serpents) and horizontal, like a snake.[16] Many observers have reported a vertical motion (like a caterpillar), but true water snakes move only in a horizontal plane, from side to side.

Not only were American naturalists concerned over the sea-serpent, but European naturalists also became interested. Sir Joseph Banks, president of the Royal Society of London, was convinced of its reality by reports he received from American naturalists and from his countryman David Humphreys[17] who had visited Cape Ann, but he, like many other scientists, doubted the relationship of the Loblolly Cove snake with humps to the sea-serpent. Dr. J. D. Hooker, famous English explorer and naturalist, was also convinced of a real sea-serpent, largely on evidence from Cape Ann.

The day when Col. T. H. Perkins wrote to his friend John P. Cushing 13 October 1820, he again saw the sea-serpent some two miles across Gloucester Harbor off the western shore.[18] His closest view was from about a half-mile and he observed some 40 feet of the creature at a time while undergoing vertical motion. With his spyglass he detected a single horn on the head some 9-12 inches long, but Oudemans believed he saw the tongue and not a horn, since only one other observer had reported a horn, but several had observed the tongue.

According to Oudemans, the next visit of the Cape Ann sea-serpent seems to be the summer of 1824 when a Mr. Ruggles published a note in the *Newburyport Journal* of his observation of the sea-serpent off Plum Island in Ipswich Bay. He was able to observe the teeth in the creature's mouth. In a lecture given at the New York Lyceum in October of 1828 on 'The History of Sea-Serpentism' by Samuel L. Mitchill, a noted ichthyologist, it was stated that, 'This alleged monster of the deep first haunted the coast of Massachusetts, and frightened more particularly the neighborhood of Gloucester with his presence.' At first Dr. Mitchill be-

14. A. C. Oudemans, op. cit., p. 193.

15. A. C. Oudemans, op. cit., pp. 17-19.

16. Cheever Feltch, 'Extract of a Letter . . . to Editor of Boston Centinel,' *Amer. Jour. Sci. and Arts* 2 (1820), 157-59.

17. David Humphreys, *Letters to the Rt. Hon. Sir Joseph Banks Containing Some Account of the Sea-serpent Frequently Seen in Gloucester Bay* (New York: Kirk and Mercein, 1817), 86 pp.

18. *Boston Daily Advertiser*, 13 October 1820.

lieved the accounts given by witnesses, some of which were abstracted in his lecture, but gradually he became skeptical. It was he who first identified the snake from Loblolly Cove as a deformed black snake and not the spawn of the sea-serpent. Also, he confirmed the specimen landed by Captain Rich and his crew to be nothing but a tuna. He further noted that 'after the capture of the fish [tuna], the persons who, when they saw him in the water, declared positively that he was the sea-serpent, now changed their minds and swore he was not.'[19]

At a meeting of the Essex Institute held at Kettle Cove in Manchester 12 July 1861, F. W. Putnam reported on sea-serpents.[20] He quoted his mentor Louis Agassiz, at Harvard University, saying, 'There was no reason why there should not be a sea-serpent, but as yet he knew of no sufficient proof that there was one.' Earlier, Agassiz, at a lecture delivered in Philadelphia on 20 March 1849, said, 'It would be in precise conformity with analogy that such an animal should exist in American seas. I see no chance to doubt that some huge animal with outward form much like a serpent did sometimes visit these shores.'[21] Also, Prof. Benjamin Silliman of Yale University stated, 'We are ourselves not skeptical. We do not see how such evidence as was presented by Dr. Jacob Bigelow, in our second volume (*Amer. Jour. Sci. and Arts*) can be set aside.'[22]

In a review of sea-serpents published by R. M. Devens it was pointed out that 'the vicinity of Cape Ann seems to have been a favorite resort with this monster.'[23] Evidence from Cape Ann has always remained the most detailed and convincing. However, A. S. Packard, Jr., a colleague of Putnam at the Peabody Academy of Science in Salem (now Peabody Museum of Salem), believed that the explanation offered originally by D. C. Beard that sea-serpents were actually giant squid was correct.[24] In addition to various explanations for the sea-serpent based upon misinterpretation of large marine mammals, some people believed that prehistoric monsters such as the mosasaurs, plesiosaurs, ichthyosaurs, etc. might still survive at great depths of the ocean and occasionally come to the surface. J. B. Holder wrote, 'It is tolerably well settled among zoologists that the existence of such an animal [prehistoric monster] in the present geological time is not improbable.'[25] It has also been generally understood that a 'sea-serpent' does not necessarily need to be a 'serpent' (i.e., a snake) in the literal sense. The name has been applied to a variety of large marine animals that bear no relationship to each other. The name 'sea monster' would be more appropriate. A true serpent is an air-breather and must come to the surface, but not all reported 'sea-serpents' are of that nature. Also, serpents move from side to side and not vertically as so many 'sea-serpents' were reported to do.

In 1883 Henry Lee published a book entitled *Sea Monsters Unmasked.* With reference to observations from Gloucester Harbor in the early nineteenth century he wrote, 'Of this I can offer no zoological explanation.'[26] Other reports of sea-serpents have been interpreted as a row of porpoises, sharks, giant eels, sea turtles, low-flying birds, or whales, or as mistaken observations based on floating objects or even optical illusions, but no one has given a satisfactory explanation for the observations of so many people at Cape Ann. Oudemans himself who has compiled and analyzed almost all of the known records throughout the world does not attempt to explain the Cape Ann sea-serpent.

On 24 July 1886 many people caught sight of a sea-serpent swimming off Rockport. Albert W. Tarr and his family first saw it off Gully Point as it moved across Sandy Bay, and called it to the attention of Judge Sumner D. York and his friends. On the 12th of August Calvin W. Pool and Granville B. Putnam saw it again between Andrews Point and Halibut Point as it made its way into Ipswich Bay. Testimonies for these records are deposited in the archives of the Sandy Bay Historical Society in Rockport. Putnam published an account of his observations in *History of the Town of Rockport.*[27] He estimated the length no less than 80-100 feet

19. S. L. Mitchill, 'The History of Sea-serpentism,' *Amer. Jour. Sci. and Arts* 15 (1829), 351-56.

20. F. W. Putnam, 'Notes on the Sea Serpent,' *Proceed. Essex Institute* 3 (1864), 98.

21. Alonzo Lewis and J. R. Newhall, *History of Lynn, Essex County, Mass.* (1865), 620 pp. (on sea-serpent, pp. 382-86).

22. J. W. Marshall, et al., *History of the Town of Rockport* (1888), 295 pp. (on sea-serpent, p. 255).

23. R. M. Devens, *Our First Century* (1879), 1,004 pp. (chapter on sea-serpents, p. 577).

24. A. S. Packard, Jr., 'A Note on the Sea Serpent,' *Amer. Nat.* 14 (1880), 150.

25. J. B. Holder, 'The Great Unknown,' *Century Magazine* 44 (1892), 248.

26. Henry Lee, *Sea Monsters Unmasked,* International Fisheries Exhibition (London: W. Clowes and Sons, 1883), 139 pp.

27. G. B. Putnam, 'The Sea Serpent' (pp. 251-55, in: Lemuel Gott, Ebeneezer Pool, et al., *History of the Town of Rockport,* 1888, 255 pp.).

with a head the size of a nail cask. Its motion was vertical with a dozen humps and a speed of not more than five miles per hour. A sketch of this sea-serpent made by David Brewer as he observed it off Pigeon Cove, Rockport, is included in the Scrap Book on Sea-Serpents (No. 15) in the archives of the Cape Ann Historical Association. Also, a handwritten account of 'The Sea Serpent at Pigeon Cove' written by Virginia Henderson, sister-in-law of David Brewer, is deposited there accompanied by a brief description and a sketch of the sea-serpent showing four humps based on her observation as it rounded Andrews Point and swam toward Halibut Point in the summer of 1886. Prof. Alfred Mansfield Brooks, formerly president and curator of the association, wrote to me 29 May 1953 that Judge Sumner D. York had related to him personally a very convincing account of his observations on the sea-serpent off Rockport in 1886.

In 1955 Dr. Anton Bruun, a noted Danish oceanographer, announced at the International Congress of Zoology held at Copenhagen that he believed sea-serpents really existed, and was planning to organize an expedition into southern waters, but this he did not live to do. He narrowed down all of the records which came to his attention to what he believed were six 'indisputably authentic' cases, including the ones which visited Cape Ann in 1817-1819.[28]

All told, many supposedly valid visits were made to Cape Ann by the Great Sea-Serpent between 1639 and 1886. The explanation still remains a mystery.

28. A. E. Hotchner, 'Are There Sea Serpents, Really?' *This Week* (magazine supplement to N.Y. *Herald Tribune*), 14 Aug. 1955, pp. 17, 19.

Dr. Ralph W. Dexter published his first paper for the American Neptune *in the spring issue of 1985 which was devoted to 'A Century of Fishery Biology at Cape Ann, Massachusetts.' He was born and raised in Gloucester, and studied the marine life of Cape Ann for his doctoral dissertation (1933-1937), and has continued research on Cape Ann marine ecology to the present time. He is now Professor Emeritus of Biological Sciences at Kent State University, Kent, Ohio.*

New England Forests and British Seapower: Albion Revised

R. J. B. KNIGHT

From the days when Cromwell ruled England till the battle of the Hampton Roads sounded the knell of wooden ships of war, the heads of the English Navy worried over its timber shortage.

WITH this sentence, sixty years ago, Robert Greenhalgh Albion began his book *Forests and Seapower* and since that time it has greatly influenced naval and economic historians.[1] The book was very much a pioneering work, bringing a fresh angle to naval history which more than needed it at that time. By stressing the importance of timber as the basis of seapower and examining the problems which the British government faced in securing it, he went deeper into the subject than battles and personalities.[2] His general conclusions were critical, particularly of the administration of Royal Forests, while he saw the colonial woods policy as ineffectual; he took the politicians, the Navy Board and the dockyards to task for conservatism and corruption; and he traced a direct causal link between inadequate supply and inadequate administration and failure in war. The first criticism is sound; recent research has made the second less tenable; and the third looks distinctly fragile.

As with many pioneering works, many of Professor Albion's detailed judgments now look dated. His attitude to the standards of morality and efficiency of naval administrators, such as Pepys and Sandwich, was highly critical and it is notable that his criticisms of the latter, whom he labelled as 'that Lord of Misrule' in his book, are absent in the article that he wrote in 1952.[3] Albion, in fact, was one of the last of a long tradition of historians whose *mores* were firmly set in the Victorian age and none of them could find anything good to say of eighteenth-century administrators. He thus sided with Lord St. Vincent in his measures to reform the civil administration; cast the state of nation's naval credit in a poor light; highlighted, yet failed to prove, a consistently high level of dockyard corruption; and castigated the design of British ships.[4] Historical opinion has been revised since the 1920s and it would be unrealistic, in turn, to be over-critical; Albion was, in such a wide survey, making use of the scholarship which he had to hand. These points did, however, fit snugly into his central thesis and the phrase 'two centuries of anxiety' to which he referred has made its mark. Book after book stresses that shortage of timber supplies was one of the main reasons for delays and shortcomings of the eighteenth-century British navy. Many have jumped to the conclusion that the problem of supply was continually worsening, from the time of

An earlier version of this paper was read at the thirteenth Annual Symposium on American Maritime History held at the Maine Maritime Museum, Bath, Maine in May 1985.

1. R. G. Albion, *Forests and Seapower: the timber problem of the Royal Navy 1652-1862* (Cambridge, Mass., 1926); also 'The timber problem of the Royal Navy, 1652-1852,' *The Mariner's Mirror*, vol. 38 (1952), 4-22. A recent example of Albion's wide interpretative influence can be seen in Russell Meiggs, *Trees and timber in the Ancient World* (Oxford, 1982), esp. p. 116.

2. Professor Albion's principal successors were P. W. Bamford, *Forests and French Seapower* (Toronto, 1956) and J. J. Malone, *Pine Trees and Politics; the naval stores policy in Colonial New England, 1691-1775* (London, 1964).

3. *Forests and Seapower*, p. 282. Four volumes of the papers of Lord Sandwich, who was First Lord of the Admiralty, 1771-1782, were published in the 1930s and had gone some way to re-establishing his reputation.

4. For the modern views on these problems see D. Baugh, *Naval Administration in the age of Walpole* (Princeton, 1965); Roger Morriss, *The Royal dockyards during the Revolutionary and Napoleonic Wars* (Leicester, 1983); 'St. Vincent and reform, 1801-1804,' *Mariner's Mirror*, vol. 69 (1983), 269-90; Brian Lavery, *The Ship of the Line; the development of the Battle Fleet, 1650-1850* (London, 1983-1984).

TABLE 1

WHAT DIAMETERS IN THE ROUGH STATE WILL MAKE MASTS, YARDS AND BOWSPREETS FOR A SHIP OF EACH CLASS

n.b. mizen masts and below 64 guns are made with one stick

SINGLE STICKS	100	90	80	74	64	50	44
Main mast	39⅛	38	37	37	34½	30	28
Foremast	35	34½	33¾	32¾	30¾	27⅜	25⅜
Mizen mast	23⅜	23⅛	22½	22⅜	20¾	19⅜	17½
MADE MASTS							
Main mast	29	29	28½	28½	27		
	28	28	28	28	26		
	27½	27	26½	26½	25		
	½ of 24	½ of 24	½ of 23½	½ of 23½	½ of 21		

Source: National Maritime Museum, Middleton Collection, M1D/8/1 (6), ca. 1778.

the elegant pleadings of John Evelyn in *Sylva* in the late seventeenth century to Admiral Collingwood anxiously planting acorns at every possible moment at the time of Trafalgar.[5] A careful reading of the book reveals that he acknowledged that, in the long run, the supply of timber to the navy was successful and that there were few difficulties in the first part of the century. Indeed, Albion himself saw 1775 as the beginning of the problem.[6]

In no other aspect was Albion more emphatic than when he stressed the critical dependence of the British navy on the very large mast sticks, which were only available from New England forests. He argued that when the mast supply was cut off at the beginning of the American Revolution, the navy staggered from delay to delay; this inefficiency influenced the course of the war, and, by implication, this war rather than any other. The delay was caused because British shipwrights had to relearn the art of making 'made masts' (i.e. a mast made of more than one stick), which they had abandoned in the previous century when New England large sticks became available.[7] Albion, however, was simply not correct in this assertion. There are constant references to the making of made masts from the 1690s;[8] in 1746, for instance, the Master Shipwright at Plymouth dockyard wrote to the Navy Board:

> And as these stores have not a sufficient number of large

5. Daniel A. Baugh makes some shrewd comments on Albion's influence in his *Naval Administration, 1715-1750* (London, Navy Records Society, 1977), pp. 237-39.

6. *Forests and Seapower*, pp. vii-ix, 133, 412.

7. See *Forests and Seapower*, pp. 282-88.

8. For instance, John Smith, *The Seaman's Grammar and Dictionary* (London, 1692), pp. 15-16; William Sutherland, *Britain's Glory, or Shipbuilding Unveiled* (London, 1726), pp. 55-62; National Maritime Museum, SPB/37a, manuscript notebook by John Williams, shipwright at Woolwich yard, ca. 1720. 'A Made Mast. The spindle to be in two pieces, thats two masts of 22 hands. . . .'

masts to make one out of a single tree, we shall in that case be obliged to make made-masts for all above 30 inches, several of our largest New England masts having been reduced for defects. We have but one in store of 32 inches; all the rest are from 29 inches downwards . . . we humbly propose the mast-makers and boatbuilders, and such other workmen as may be necessary to forward the making such masts, may be employed thereon two tides each day (Extra), till we have provided a sufficiency of them to answer all events.[9]

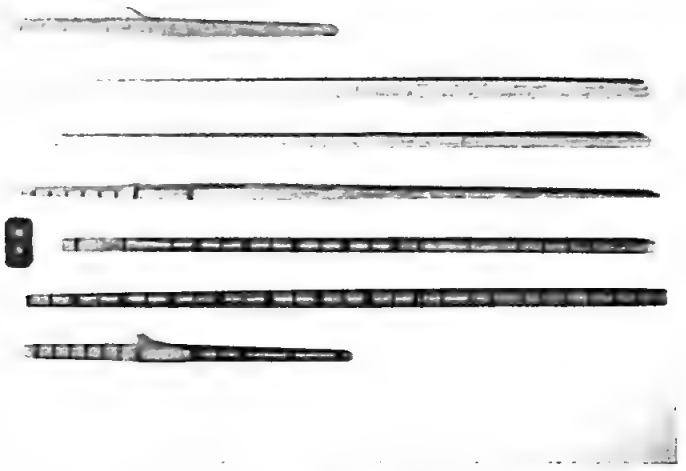
Twenty years later, William Falconer stated simply in his dictionary:

. . . the lower masts of the largest ships are composed of several pieces united into one body . . . as . . . a mast, formed by this assemblage, is justly esteemed much stronger than one consisting of any single trunk, whose internal solidity may be very uncertain.[10]

Albion also failed to realize that there was a steady increase in size of ships of the line through the century. Those built between 1755 and 1815 were 40 percent bigger than those built between 1689 and 1755; no single sticks were going to provide the material for the lower masts of these ships.[11]

Indeed, few really large masts actually came across the Atlantic. Even at the height of the Seven Years War the dockyards were using no more than a dozen sticks a year of over thirty-two inches.[12] Very large trees were undoubtedly there for the cutting, yet, quite apart from the ineffectiveness of the Colonial Stores policy, there was a powerful economic motive for dealing only in the smaller sticks. It was well stated in a slightly later context, at a time when the British were attempting to exploit the Canadian forests; Commissioner Henry Duncan of Halifax yard wrote in 1788:

Altho' there is a very great disproportion between the price of a large and small Mast in all Contracts that I have seen; yet from my observations in my different tours even that difference does not seem enough; for almost in any of the rivers Masts may be found up to 24 inches growing on the banks, which may be fell'd, trim'd & loaded at very little expense indeed; in this size & all under very few of them turns out bad



The seven pieces of a lower mast: central spindle, fore, after and side fishes, and (top and bottom of the picture) the two cheeks with the bib. The system of interlocking coaks, to maintain internal solidity, can be clearly seen. (Reproduced with the permission of the Trustees of the National Maritime Museum, Greenwich.)

after an expense has been incurred upon them; whereas the very large sticks are generally farther from the water, are seldom found together, roads through the woods must be made for each of them, & where one of the smaller size prove defective, 15 or perhaps 20 of the larger are unsound. It appears to be very much the interest of a Contractor to procure large Masts, the difference in the prices being so great, yet I am certain a man would sooner make a fortune if he never looks for a stick above 22 or 24 inches.[13]

It must, however, be said that there were delays in fitting out fleets during the American War because of masting problems. The battle of Ushant, in the fall of 1778, when two lines of ships sailed slowly past each other firing into the rigging, caused enormous problems and subsequently delayed ships getting to America. But this delay was not caused by a shortage of large masts; there were plenty in the yards.[14] The real cause was a lack of space and of labor. By the end of the century, a first rate had up to twenty-three masts, yards and

9. Quoted in Baugh, *Naval administration* (1977), p. 259.

10. William Falconer, *An Universal Dictionary of the Marine* (London, 1769), entry under 'Mast.'

11. See Table 1. This increase in size is discussed in R. J. B. Knight, 'The building and maintenance of the British Fleet during the Anglo-French wars, 1688-1815,' in Martine Acerra, Jose Merino and Jean Meyer, ed., *Les Marines de Guerre Europeenes XVII-XVIIIe siecles* (Paris, 1985), pp. 42-45.

12. See Table 2. An unpublished thesis by M. J. Williams, 'The naval administration of the Fourth Earl of Sandwich, 1771-82' (Oxford, 1962), pp. 315-27 contains a useful general critique of Albion's mast argument.

13. N. M. M., Middleton collection, MID/1/53, 30 Sept. 1788, Duncan to Charles Middleton, at that time Comptroller of the Navy Board. See Malone, *Pine Trees and Politics*, pp. 52-53, and Samuel F. Manning, *New England masts and the King's Broad Arrow* (Kennebunk, Maine, 1979).

14. N. M. M., Portsmouth Dockyard records, POR/D/21, Yard officers returns to the Navy Board, 13 Jan. 1778. There were 149 rough masts in the mast ponds between 27 and 34 inches at this date.

spars, with the main mast up to a hundred and twenty feet long, nearly forty inches in diameter and weighing up to eighteen tons. The smallest spar would be the fore-topgallant yard, thirty-one feet long, weighing perhaps seventy-five pounds. To make them was a considerable burden on the dockyards. Thus to build a lower made mast for a ship of the line was a long and expensive business; it took twelve shipwrights sixty-one days for the mast of a 100-gun ship and only slightly less for a 74.[15] At Portsmouth, for instance, as early as February 1778 there were six extra shipwright gangs in the yard masthouse and the Master Shipwright wanted them to work 'nights' (five hours overtime per day). In April the yard still could not keep pace, long before Ushant, and he had to resist Navy Board directions to put more gangs into the masthouse on the grounds that it was impractical. After the battle shipwrights were taken off other projects to help with the masting problem.[16] The navy, in short, did not lack timber; it lacked skilled shipwrights.

What happened, therefore, when the New England sticks were no longer in the mast ponds, which they certainly were not between 1778 and 1780? Albion is contradictory here. At one point he acknowledges that pines from Riga in the Baltic were considered superior, but 250 pages later he asserts that 'the Baltic forests at their best could not provide adequate substitutes for the largest New England pines.'[17] The opinion of the Portsmouth shipwright officers was, by contrast, quite clear. In 1780 they were asked how savings could be made in timber consumption. Since masts were now made of Riga fir, they replied, they could be made one inch less in diameter, 'as they will be superior in strength, much cheaper and of less weight aloft.'[18] Quality was, therefore, not a problem.

A glance at Table 2 and at the graph will show that masts from the Baltic forests, mostly shipped out from Riga, had supplied the British navy from well before the American War. Not only that, it demonstrates clearly that there had been many more Russian masts than American from the time of the Seven Years War. At the time of the Falkland Islands Crisis of 1770 and 1771, American masts remained at under a thousand, while Riga, much more flexible to British demand, supplied over three thousand. When it came to the American War, Riga was well able to supply the British dockyards. By 1779, Baltic masts imported were slightly under five thousand, while there were no American masts at all. The missing American masts caused some inconvenience, for even with made masts the central spindle was a very large piece of timber. The biggest ships of the line, requiring a main mast of 39 inches diameter, required a spindle of 29 inches, which itself was a very large stick.[19] It is clear that the smaller Riga sticks of 22 to 19 inches took up the brunt of the shortage, their consumption rising to three times what was used in the Seven Years War, while there was a corresponding decrease in consumption of the large American sticks. The dockyards adapted to the new circumstances remarkably smoothly. Models were made and modifications agreed. Adam Hayes, the oldest Master Shipwright, by now in the post at Deptford yard, wrote to Charles Middleton in 1779: 'I am (of the) humble opinion the best way for making made Main Mast etc if drove to necessity for want of Large Masts to form them the Common way will be . . . the Spindle in three trees.'[20] It was a more expensive method, for only $5\frac{1}{2}$ New England trees for a main mast, while the two methods using Riga sticks used $7\frac{5}{8}$ or $6\frac{1}{4}$ trees respectively.[21]

It is perhaps difficult to set such evidence against Albion's evocative and persuasive style:

> Time and again throughout the war came the tale of squadrons scattered and great ships rendered useless as spars crashed to the deck while worn out masts split open and tumbled into the sea. . . . With the exception of one wicked hurricane in 1780, the winds of the Revolution probably blew no

15. N. M. M., Middleton collection, MID/8/1/5/, 'An Estimate of the Charge of the Materials and Workmanship used in completing Made Masts for 100 and 74 gun ships, exclusive of the trees which form the Mast,' ca. 1778. The very high price of large masts (see Malone, *Pine Trees and Politics*, Appendix B), as opposed to masts of 24 inches and below, should be set against the costs of this long process.

16. N. M. M., POR/D/21, 15 Feb., 21 Apr., 21 Aug. 1778; POR/D/22, 6 Sept. 1779, 21 Mar. 1780. A good number of smaller spars were contracted out. For the shortage of labor see Knight, 'Building and maintenance,' pp. 38-39.

17. *Forests and Seapower*, pp. 31, 285.

18. N. M. M., POR/D/22, 24 Apr. 1780.

19. One estimate gave the spindle dimensions of a 74-gun ship, which because of their numbers was a vital dimension, as 29 inches, which differs slightly from Table 2, N. M. M. MID/8/1/2/, 'An Account of the Particulars of making the Main, Fore and Mizen masts and bowsprits of H.M. Ship the Alexander of 74 guns, with the value of materials and workmanship,' Deptford Yard, 26 Sept. 1778.

20. N. M. M., Middleton collection, MID/1/89, Hayes to Middleton, 5 Mar. 1779.

21. See N. M. M., MID/8/1/9/, 'An Account of Riga Trees, the Number and Parts required to form Made Mast for Ships of 100 guns, and 74 guns.'

TABLE 2 (i)

Masts: Average Annual Consumption, 1756-1782

	New England													Riga										Norway
	36"-32"	31"	30"	29"	28"	27"	26"	25"	24"	23"	22"	21"	20" and below	26"	25"	24"	23"	22"	21"	20"	19"	18"	17" + 16" and below	16" - 6"
1756-1762 Seven Years' War	12·5	6·9	18·4	31·1	32·7	38·3	30·1	20·9	9·4	8·1	4·1	1·4	3·9	4·1	18·1	34·1	33·4	43·0	51·7	62·9	78·0	90·6	173·4	2766·9
1763-1769 Peace	2·0	3·0	6·8	5·7	6·5	9·9	11·0	8·1	4·9	3·1	2·4	1·3	8·4	1·9	4·9	7·0	12·3	13·3	22·1	22·6	23·6	25·4	44·2	728·7
1770-1771 Falkland Islands Mobilisation	2·5	3·5	12·5	21·0	17·0	17·0	19·0	18·5	7·5	4·5	3·5	2·5	5·5	2·0	5·5	13·5	21·0	24·5	30·0	25·5	33·0	30·0	88·5	1500·5
1772-1774 Peace	3·3	3·6	9·3	11·3	9·6	11·3	18·0	9·7	4·3	4·0	1·0	2·0	11·0	1·7	3·7	8·3	17·5	11·7	19·0	15·3	31·0	24·7	58·7	966·0
1775-1777 War in America	2·0	2·0	4·3	10·0	14·7	13·3	21·0	7·3	2·7	1·3	1·0	2·0	9·0	1·0	6·0	20·0	28·7	40·3	53·0	50·7	42·7	58·3	135·7	2397·7
1778-1782 European War	1·6	1·4	6·8	14·4	17·4	18·2	17·6	8·4	4·2	1·8	0·4	1·8	48·0	1·4	12·0	19·4	69·2	157·2	216·0	172·2	215·2	184·2	221·2	3668·8

ADM 106/3182 'Expence of several species of stores at the several yards from 1750 to 1783 inclusive.' A year by year analysis of all stores consumed by each dockyard, here totalled and averaged.

Source: Public Record Office, ADM 106/3182

TABLE 2 (ii)

YARDS AND BOWSPRITS: AVERAGE ANNUAL CONSUMPTION, 1756-1782

	New England: Yards		Bowsprits											Riga	
	21" and above	20" and below	36"-32"	31"	30"	29"	28"	27"	26"	25"	24"	23"	22"	Yards of all sizes	Bowsprits of all sizes
1756-1762 Seven Years' War	41·6	39·3	25·1	9·0	10·6	7·4	6·3	11·4	3·7	4·6	3·4	1·4	0·9	2·7	7·8
1763-1769 Peace	14·1	11·9	5·7	3·0	4·8	4·1	5·1	1·6	2·1	1·7	1·0	0·1	1·4	1·4	8·6
1770-1771 Falkland Islands Mobilisation	29·0	16·5	11·0	4·5	11·5	8·5	10·0	9·5	3·5	5·0	—	—	—	2·0	5·5
1772-1774 Peace	13·7	15·0	7·3	2·3	2·0	5·0	3·0	4·3	3·3	2·0	0·3	0·6	1·0	5·0	2·0
1775-1777 War in America	22·3	11·3	6·3	3·3	7·0	9·0	10·7	4·3	6·3	0·3	0·6	0·3	1·0	not recorded	24·0
1778-1782 European War	13·0	9·0	8·4	6·4	3·8	4·4	8·6	7·0	4·6	0·4	—	—	0·4	not recorded	61·8

Source: Public Record Office, ADM 106/3182

harder than at any time. . . . Yet British fleets in other wars had met similar winds with only the occasional loss of minor spars.[22]

Setting apart the American Revolution as different, with, it must be said, very little evidence, Professor Albion went on to construct an implicit interpretation that the loss of the colonies was ultimately due to the mast shortages. Yet was the American War any different from any other eighteenth-century wars? Professor Baugh notes of the war of 1739-1748 'the wholesale destruction of masts and rigging' and he feels that overmasting and the 'reckless crowding of sail' were the most important factors.[23] Many factors could lead to the loss of a mast. Standards of seamanship and of shipboard maintenance should be considered, as well as insufficient time for preparation for a commission. A Navy Board order of 1780 points to a completely different defect. 'There have been many instances during the present war of ships losing and springing their masts and topmasts, from a want of time to enable them to stretch their standing rigging before they . . . proceed on service.'[24] Consumption of masts was undoubtedly high during the period, but there is no evidence to suggest that their quality was any different from any other war and it is wrong to look at the American War in isolation from the rest of the century.

This raises a larger question. If the Baltic could supply cheaper, better quality and adequately-sized masts, why was there any New England trade at all? Firstly, it was an insurance policy, brought about by the fear of disruption by unstable conditions in the Baltic, caused by the rise of Russia, until the end of the Great Northern War in 1721. Between 1715 and 1727 eight naval squadrons sailed under Sir John Norris to the Baltic to protect British interests, the chief of which was the supply of naval stores.[25] At the same time, there were

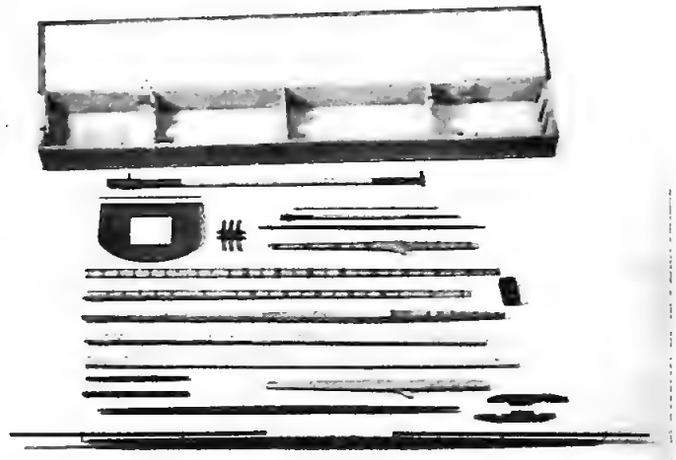
22. *Forests and Seapower*, pp. 281-82.

23. Baugh, *Naval administration* (1966), pp. 278-79.

24. Public Record Office, ADM 106/2508, Navy Board Standing Orders to the Dockyards, no. 1018, 24 Aug. 1780.

25. This is treated in general by D. D. Aldridge, 'Admiral Sir John

The assembled lower mast. The painted black bands represent alternating iron hoops and rope wooldings which kept the mast together. Note the position of the (black) cap and bib which supported and retained the topmast. (Reproduced with the permission of the Trustees of the National Maritime Museum, Greenwich.)



Boxed Admiralty model of a main mast and yards, ca. 1750. In addition to the mast pieces, there are the yards, the main top, with trestle and cross trees and the cap to support the topmast. (Reproduced with the permission of the Trustees of the National Maritime Museum, Greenwich.)

the mercantilist fears. The Commissioners of Trade and Plantations tried to replace the Baltic region as the chief supplier of naval stores by encouraging the trade with British North America, thus improving the balance of trade with Northern Europe. The result was a series of Bounty Acts, the chief of which was in 1704, which resulted in a subsidy (funded from the Naval Estimates) being paid for stores coming across the Atlantic. Ironically, of course, the region which first became unstable was the British colonies in 1775, for no British fleet went near the Baltic for seventy-five years from the last of Norris's expeditions. British difficulties diminished because Sweden and Russia managed to reach a diplomatic balance, which was to last until the very last years of the eighteenth century, and also because Holland's domination and therefore control of the trade was slowly broken.[26] Trade with Russia increased dramatically in the mid-century, not only in naval stores, but also in wheat, iron, flax and hemp.[27] The importance of these trades to both parties was strong enough for it to withstand easily the diplomatic isolation which Britain went through in the American Revolutionary War. Even at the height of anti-British feeling during the period of the League of Armed Neutrality, it was in no-one's interest, least of all France's, to stop trade in the Baltic. The naval stores contest began only when the stores had left the Kattegat.[28]

Early mercantilist and strategic pressures, therefore, brought about an orthodoxy which was to last the century. The Colonial Stores policy was expensive and as an insurance policy it became less and less important. When the supply was cut off in 1775, the Baltic filled the gap effortlessly. The Baltic trade continued to grow powerfully until the imposition of the Continental Decrees by Napoleon in 1808. The industrial expansion of England from the 1780s led to an enormous growth in demand from the Baltic for sawn softwoods, particu-

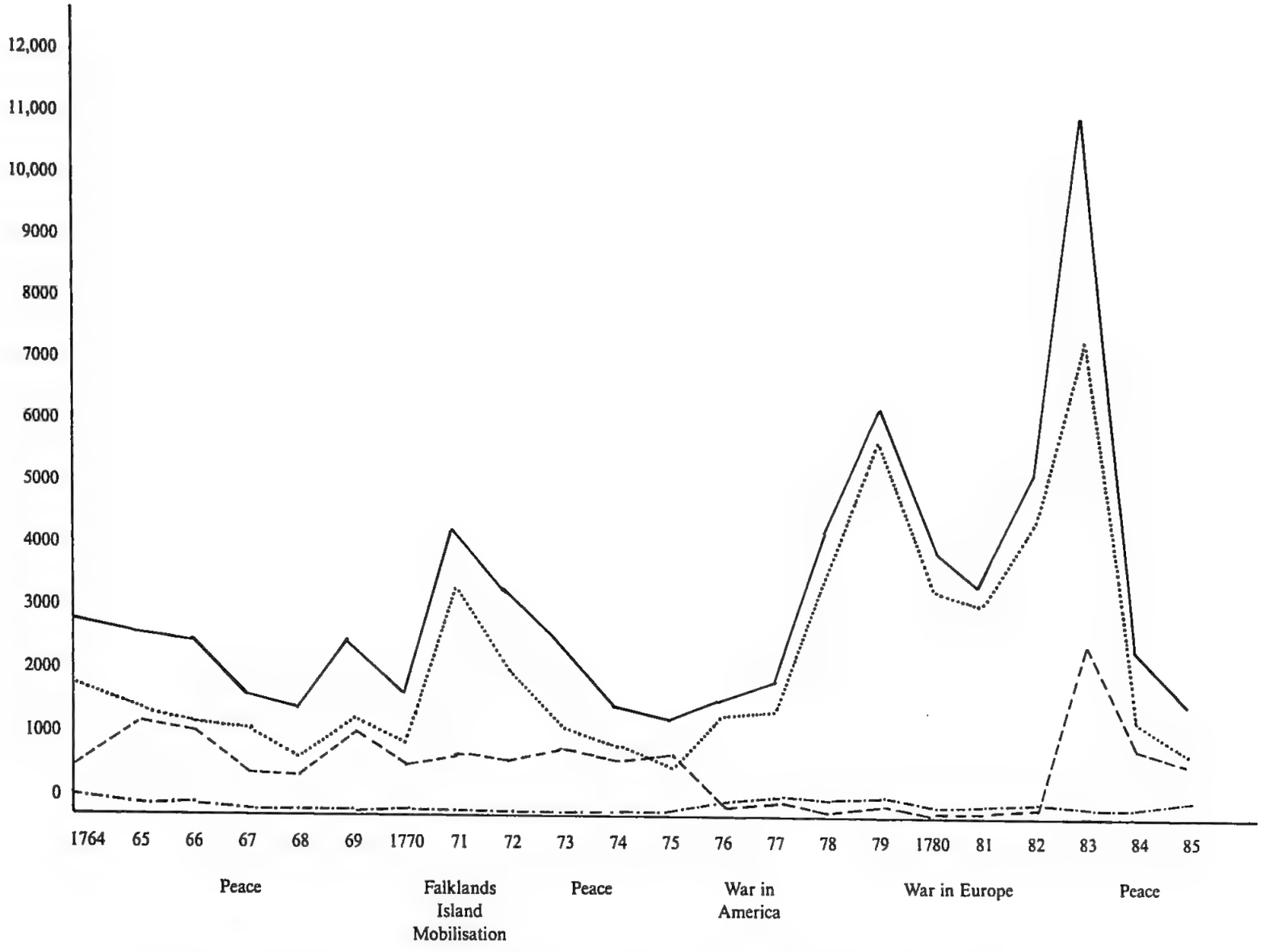
Norris and the British naval expeditions to the Baltic Sea, 1715-1727' (London University Ph.D. thesis, 1971).

26. See J. J. Malone, 'England and the Baltic Naval Stores trade in the seventeenth and eighteenth centuries,' *The Mariner's Mirror*, 58 (1972), pp. 375-95. Though an excellent survey of the early part of the century, he overrates the North American contribution by the 1770s.

27. For instance, Jennifer Newman, 'The Russian grain trade, 1700-1779,' *The Baltic grain trade; five essays*, ed. Walter Minchington (Exeter, 1985), pp. 47-59; 'The English contribution to the economic revolution in Russia in the eighteenth century,' paper presented to the Association for the History of the Northern Seas, Dartington, Devon, September 1985.

28. David Syrett, *Neutral rights and the War in the Narrow Seas, 1778-82* (Fort Leavenworth, Kansas, 1985).

British Imports of Great Masts, 1764-1785



Source: Public Record Office, BT/6/240. 'Account of Bowsprits, Mast and Yards imported,' 5 Jan. 1764 - 5 Jan. 1786.

larly for the building industry. The mast trade continued to flourish and by 1805 70 percent of imported masts came from Riga.[29] However, when Europe turned protectionist as a result of the Continental Decrees, British Customs dues from 1810 came to a massive 30/- a load and it allowed the preferred Canadian timber trade its boom years until the Free Trade days of the 1840s.[30] The British government was finally able to call in its insurance policy over a hundred years after it took it out, though it was the Canadians who benefitted rather than original New England colonies.

It was at this time also that the other timber resource, hardwoods for the hulls, also became scarce. British oak had had to be supplemented on a large scale by Sandwich in the 1770s, principally from the southern Baltic ports such as Stettin. Prejudice against American live oak, some of it justified in the condition in which it reached the dockyards, was never overcome. Alternative sources had to be found from the turn of the century, when the hugely increased scale of war caused a real shortage. This was exacerbated by the difficulties which the British navy put itself through during the first years of the nineteenth century, particularly in its timber contracting.[31] The Adriatic and even the Black Sea were being combed for oak. A Portsmouth shipwright was despatched to South Africa to investigate the quality of stinkwood. Two cut-down ships of the line were despatched around the world to call at Botany Bay to pick up cargoes of Australian wood. Most important, the teak of India, and its shipbuilding resources, were called into play. Another consequence was that iron came to be used extensively in the construction of knees and standards.[32]

There was unquestionably both a softwoods and a hardwoods crisis from the early nineteenth century, but the timber shortage of the Royal Navy before 1800 is largely illusory. This is not to say that the procurement of naval stores should not have been perceived as a central problem, or that, in the Baltic region, it was never less than a cornerstone of British foreign policy. But the fleet delays that can be traced before that time had little to do with the shortage of timber; they were much more due to administrative weaknesses and shortages of manpower. In Albion's crucial period during the American War, 1775 to March 1783, Britain produced 181 naval ships (132,928 tons), of which 36 were ships of the line (54,685 tons). Moreover, by the end of the war there were 30 ships of the line on the stocks. The capacity of British shipbuilders was rising rapidly and for both ships of the line and frigates, Britain was to outstrip both France and Spain together.[33] One can point to many reasons for the loss of the American colonies; it was not, however, a shortage of mast timber and further, the great masts from New England were very far from crucial.

29. See Sven-Erik Aström, 'British timber imports from the Baltic, 1775-1825,' Diagram 1; Jorma Ahrenainen, 'Britain as a buyer of Finnish sawn timber, 1760-1860': papers presented to the Association for the History of the Northern Seas Conference, Dartington, Devon, September 1985.

30. Sven-Erik Aström, 'North European timber exports to Great Britain, 1760-1810,' in *Shipping, Commerce and Trade; essays in memory of Ralph Davis* ed. P. L. Cottrell and D. H. Aldencroft (Leicester, 1981), 8; Gerald Graham, *Sea power and British North America, 1783-1820* (1941; reprinted New York, 1968), pp. 142-44.

31. See Roger Morriss, *The Royal dockyards during the Revolutionary and Napoleonic Wars*, pp. 74-89, for some parallel criticisms concerning Albion's interpretation of the hardwood shortage during the St. Vincent period of naval administration.

32. B.L.Add.MSS.34922, fos. 339-42, report from Fiume about oak from Ragusa; J. J. Packard, 'Sir Robert Seppings and the timber problem,' *The Mariner's Mirror*, vol. 64 (1978), 148-49; R. J. B. Knight and Alan Frost, *The journal of Daniel Paine, 1794-1797* (Greenwich and Sydney, 1983), pp. 77-96; R. A. Wadia, *The Bombay dockyard and the Wadia Master Builders* (Bombay, 1954), pp. 191-254.

33. See the dramatic graphs in Jose P. Merino Navarro, *La Armada Espagnola en el siglo XVIII* (Madrid, 1981), pp. 357-58.

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Captains and Diplomats, Americans in the Río de la Plata, 1843-1846

Robert W. Randall

WRITING to his government from Buenos Aires, Argentina, on 15 November 1843, United States Consul Amory Edwards said: 'I hope that the steps taken by Commodore Turner will not have the effect of lessening the good feelings, so freely shown of late."[1] That comment set the tone for the involving of three American naval officers in diplomatic and naval affairs in the region of the Río de la Plata in the mid-1840s. It also signalled an acrimonious conflict between those officers and diplomatic representatives on the scene, the latter abetted by government positions in Argentina and the United States.

The involvement and intra-American conflict arose over differing interpretations of the best interests of the United States in the Río de la Plata, the estuary of the Paraná and Uruguay rivers, and the fledgling countries that bordered it. As those countries—the Argentine Confederation, represented by Buenos Aires, and the Oriental Republic of Uruguay, represented by Montevideo—struggled toward nationhood and between themselves and tried to fend off European intervention, American naval vessels from the Brazil Squadron went into the area to protect the commerce and citizens of the United States. In attempting to do that, three prominent commanders, acting on their interpretations of instructions and conceptions of duty, challenged a blockade of Montevideo by Buenos Aires. Their challenge, never effectively answered by the Argentine Confederation, took them onto precarious ground with respect to Buenos Aires, and, more important, Washington.

1. Edwards to Secretary of State, Buenos Aires, 15 November 1843, File Microcopies of Records in the National Archives, Despatches from United States Consuls in Buenos Aires, Roll 8, 10 November 1843-22 November 1850 (hereafter, consular despatches will be cited in abbreviated form, as Edwards to State, BA, 15 November 1843, CBA, Roll 8).

Naval officers and government officials of Argentina and the United States mentioned specifically or implied certain principles that appear to be too large for the issue to which Consul Edwards referred and for others to follow shortly. The officers stressed respect for the American flag, which included resistance to illegal search and seizure and protection of commerce and citizens of the United States, and neutral rights, primarily resistance to defective blockade. In contrast, government officials of both countries stressed the value of Argentine-American friendship and the need for those officers to maintain strict neutrality and respect for belligerent rights. Eventually they accused the Brazil Squadron units of following third-party example in their objections to the blockade, which meant that they were submitting to European intervention in Western Hemisphere affairs. About a dozen doctrines raised at one time or another seem to fall into four groups: rights of the United States flag, amity between the two countries, neutral and belligerent rights, and rejection of European intrusion.

The conflict between officers and diplomats marks the Edwards-Turner episode and its immediate successors sharply off from that of the famed Falkland Islands incident just over a decade earlier. That, too, involved Americans in Argentine waters and affairs, but saw an American naval commander strongly backed by diplomats close to hand and his government at home. Unlike their reaction to events discussed in this paper, United States officials in the early 1830s did not criticize Commander Silas Duncan when he took U.S.S. *Lexington* to the Falklands to rout what he considered to be a den of pirates and what the Buenos Aires government considered to be its official representatives in territory claimed to be legitimately Argentine.[2]

2. Duncan to George W. Salcum, U.S. Consul at Buenos Aires, BA,

In the 1830s and 1840s, Juan Manuel de Rosas dominated the Argentine Confederation.[3] Never formally more than governor of Buenos Aires province, a position he held intermittently from 1829 until his exile in 1852, Rosas effectively ruled the whole country as dictator most of that time. While he rejected the frank centralism of the so-called 'savage Unitarians' in favor of his peculiar brand of federalism, Rosas established and maintained an 'inorganic' centralized state. He did this through his absolute control of the most powerful and strategically located city and province and his indirect control over the other provinces by dominating their caudillos.

Rosas and the Argentine Confederation had their troubles with foreign intervention in the Río de la Plata.[4] Like the Portuguese colony earlier, independent Brazil controlled or exerted pressure on the east bank of the estuary throughout much of the nineteenth century. In the Rosas era, Brazil was usually on the side of those opponents of the Argentine dictator who resided in Uruguay, itself a nation created by the 1828 British mediation of a war between Buenos Aires and Brazil. For their part, the British penetrated the area commercially and politically before Argentine independence and strongly maintained that dual influence for the whole nineteenth century. In a sense, the English battled and yet did business with Rosas. They contested Buenos Aires blockading of Montevideo and imposed their own on the chief Argentine port city. A relative late comer to the Río de la Plata, France also exerted economic and political influence in both Argentina and Uruguay during the first half of the century. Blockade against Rosas and military assistance to his enemies were common French activities in the 1830s and 1840s.

The United States never during the nineteenth century attained the economic or political importance in the area exercised by the two European powers. Its trade was far below that of Great Britain, and its envoys carried little real weight in River Platine affairs until after the fall of Rosas. Indeed, the aforementioned Falkland Islands affairs led to a de facto suspension of diplomatic intercourse lasting until 1844.[5] When the wily Argentine dictator Rosas seemed to encourage the resumption of friendly relations as a counterweight to British and French pressure, American diplomats charged American naval officers with jeopardizing that diplomatic opportunity.

The naval officers at the center of conflict—Commodore Daniel Turner, Captain Philip F. Voorhees, and Commander C. J. Pendergrast—were attached in the 1840s to ships assigned to a cruising station in the South Atlantic Ocean, with headquarters at Rio de Janeiro, Brazil, hence designated the Brazil Squadron. Theirs was the fourth such station created under a post-War of 1812 policy of dispersing naval forces to various stations around the world, each small segment charged with guarding American commerce in its own cruising area. The first of the foreign stations or squadrons was located in the Mediterranean Sea, where ships were sent in 1815 to end the semipiratical activity of the Barbary states. The Mediterranean Squadron was followed by the Pacific in 1818, West Indies and Caribbean in 1822, Brazil in 1826, East Indies in 1835, Home in 1841, and Africa in 1843.[6] By the time of the first clash with diplomats and naval policies, Turner was senior captain on the Brazil station and referred to as commodore. He had had previous duty on foreign station, commanding the flagship *Constitution* of Commodore Alexander Claxton's Pacific Squadron from 1839 until Claxton's death in 1841, whereupon Turner took over that squad-

29 November and 1 December 1831, Salcum to Duncan, BA, 30 November 1831, enclosed with Salcum to State, BA, 9 December 1831; State to Francis Baylies, U.S. Chargé d'Affaires at Buenos Aires, Washington, 14 February and 3 April 1832, in W. R. Manning, ed. *Diplomatic Correspondence of the United States: Inter-American Affaires, 1831-1860* (Washington: Carnegie Endowment, 1932), I (Argentina), 75-77, 12-15. Disputes about the Falkland Islands are widely known and much written about, especially after the 1982 Argentine-British war. Old standard works which treat the 1830s incident involving American naval officers and diplomats are R. R. Caillet Bois, *Un tierra argentina, las Islas Malvinas* (Buenos Aires, Peuser, 1948), J. Goebel, Jr., *The Struggle for the Falkland Islands: A Study in Legal and Diplomatic History* (New Haven: Yale University, 1927), and H. F. Peterson, *Argentina and the United States, 1810-1960* (New York: State University of New York, 1964). An example of recent works also covering that incident is F. L. and O. M. Hoffman, *Sovereignty in Dispute: The Falklands/Malvinas, 1493-1982* (Boulder, Colorado: Westview Press, 1984).

3. This short statement on Argentina is drawn from Y. F. Rennie, *The Argentine Republic* (New York: Macmillan, 1945), J. Lynch, *Argentine Dictator: Juan Manuel de Rosas, 1829-1852* (New York: Oxford University, 1981), and J. L. Romero, *A History of Argentine Political Thought* (Stanford, California: Stanford University, 1953).

4. This brief discussion of relations between Argentina and foreign powers is based upon Rennie, *Argentine Republic;* J. F. Cady, *Foreign Intervention in the Río de la Plata, 1838-1850* (Philadelphia: University of Pennsylvania, 1929); and Peterson, *Argentina and the United States.*

5. Peterson, *Argentina and the United States,* p. 114.

6. R. E. Johnson, *Thence Round Cape Horn: The Story of United States Naval Forces on Pacific Station, 1818-1923* (Annapolis, Maryland: Naval Institute, 1963), pp. 5-7.

ron temporarily.[7] A very experienced naval officer, then, opened and presided over the struggle between captains and diplomats in the Río de la Plata of the 1840s.

The first clash came over a relatively minor matter and resulted in an apparent victory for the position and persons of the naval commanders. The chief antagonists were Commodore Turner, Consul Edwards, several other Americans, two prominent Argentines, and a decrepit American merchant vessel called *Herald.* Under the ownership of an American citizen named Silas E. Burrows and commanded by his son, *Herald* engaged between June and September 1843 in carrying fresh beef to Argentine-besieged and partially blockaded Montevideo from nearby Maldonado, a small Uruguayan port beyond the reach of the Buenos Aires forces investing Montevideo. Variously charged with carrying contraband, transporting Uruguayan troops, and sailing improperly under the neutral American flag, *Herald* was captured on 10 September 1843 by Admiral William Brown's blockading fleet off Montevideo on specific orders from the Argentine government and taken as a prize to Buenos Aires. Realizing that something was amiss in the detention of the ship, however, Argentine authorities first placed *Herald* at the disposal of Edwards and then released her to Turner, who, in early November 1843, returned her to Montevideo and into the hands of the Burrows.[8]

During the brief affair, the United States Consul at Buenos Aires argued steadfastly that *Herald*'s papers were insufficient to justify her protection as a neutral from the actions of the Argentine squadron blockading Montevideo.His position was initially crucial, because Buenos Aires officials had no wish to interfere with any United States vessel which he would certify as entitled to fly the American flag.[9] Edwards accepted responsibility for the detention of *Herald* and resisted pressure from Commodore Turner, other naval officers, and Consul R. M. Hamilton at Montevideo to agree that the freighter deserved American classification and hence his guardianship. In the conclusion of the matter, Edwards was vindicated in his view of the deficiency of the ship's papers. The State Department informed him that, lacking a proper register, *Herald* could not be deemed while abroad entitled to consular protection.[10]

In his arguments with Turner and explanations to Washington, Consul Edwards seemed to have an underlying motive. This was to promote his conviction, expressed shortly after he assumed his post and well before the affair in question, that friendship with Argentina, possibly expressed in a treaty, ought to be the long-range goal of the United States. The consul regretted the commodore's arrival at Buenos Aires virtually to take over the whole matter and deplored the possibility that his action might reduce the good feelings among officials 'so freely shown of late.' Edwards continued in that friendship theme when he reported at the end of November 1843 a private interview with the Argentine foreign minister, who had been anxious to receive a minister from the United States, settle claims and conclude a treaty.[11]

During the *Herald* affair, the commanding officer of the Brazil Squadron stressed to the point of threat the rights of the American flag as a neutral in the conflict between Buenos Aires and Montevideo. In a sense, he defined those rights in the instructions he gave to ship commanders on sending them from the squadron's station to duty in the Río de la Plata. Turner issued the first such orders shortly after he assumed command of the squadron in July 1843. He told Commander Thomas A. Conover to take *John Adams* to Montevideo to protect American commerce and interests in that region. While he should use good judgment in distinguishing between legal commerce and that which defied the rights of belligerents, and while he should be cautioned against exerting force in behalf of those who had no regard for their own or other's laws, Conover was to act against interference with lawful commerce, abuse of American citizens afloat or ashore, and 'any outrage on our Flag.'[12]

While giving heed to the requirement that commerce worthy of his protection be legal, Turner himself paid

7. Johnson, *Pacific Station,* pp. 54-60.

8. This account is drawn from CBA, Roll 8, and from File Microcopies of Letters Received by the Secretary of the Navy from Commanding Officers of Squadrons, Brazil Squadron (cited hereafter as Brazil), Roll 16, 17 July 1843-19 April 1844.

9. Edwards to State, BA, 20 September 1843, CBA, Roll 7.

10. Edwards to Burrows, Sr., BA, 6 October 1843, to E. R. Shubrick, Captain of U.S. Frigate *Columbia,* BA, 5 October 1843, and to Turner, BA, 2 November 1843, enclosed with Edwards to State, BA, 15 November 1843; Edwards to Hamilton, BA, 25 and 26 April 1844, enclosed with Edwards to State, BA, 6 May 1844, CBA, Roll 8.

11. Edwards to State, BA, 5 July 1841, 2 January and 12 April 1842; CBA, Roll 7; Edwards to State, BA, 15 and 30 November 1843, CBA, Roll 8.

12. Turner to Navy, Rio, 17 July 1843; Turner to Conover and to Navy, 25 and 28 July 1843, Brazil, Roll 16.

more attention to preventing what he saw as insult to the American flag. After sailing *Columbus* to Montevideo in mid-October 1843, the commodore informed his superiors in Washington that he deemed *Herald* to be a bona fide American merchant vessel engaged in trade allowed to neutrals. Though the ship's official register had been returned to the United States when she was sold at auction in Montevideo, those papers she did carry (bill of sale, crew list, etc.) entitled her to the protection of the United States Navy.[13] Turner, then, disputed the issue of *Herald*'s right to fly the American flag with his country's consul in Buenos Aires.

More important, the commodore charged that the Argentine fleet might be guilty of illegal search and seizure. He did this in a meeting with Felipe Arana, Minister of Foreign Affairs of Buenos Aires, held on 9 November 1843 and recorded by the surgeon of *Columbus*. As *Herald* was demonstrably an American ship, the issue raised was the right of search, and there was 'no position on which the United States were so tenacious and so unanimously determined.' He said that his country had already expended much blood and treasure in a war with the most powerful maritime nation to maintain that position and was 'prepared again to embark in war with any power rather than concede this principle.'[14] Those were strong words seemingly out of place in such a minor affair, and Turner was obviously harkening back to the sore point of British maritime practices that had contributed to war in 1812. He thought he saw principle at stake and he reacted vigorously. In that he was able to obtain *Herald* from Argentine authorities, already disposed to give her up and forget the matter, Turner might be said to have won.

In the second encounter between Brazil Squadron units and the Argentine blockading fleet in the Río de la Plata, Commodore Turner played a role in which he could not possibly win. He had to explain the overreaction of a subordinate officer to provocation far worse than the capture of *Herald,* and he had to support Argentine-American friendship even though it overrode the Navy's defense of the American flag. Turner set the direction his role would take in mid-February 1844, when he ordered Capt. Philip Voorhees to take *Congress* to the Río de la Plata under the standard set of injunctions but pointedly told him to be careful officially and privately with both Buenos Aires and Montevideo,

> bearing always in mind that it is not only the policy of our Government but their earnest desire to maintain a strict and unqualified Neutrality in all things relating to the Belligerency and to those countries generally.[15]

Warned though he was of the diplomatically delicate position he would occupy, Captain Voorhees ran afoul the Buenos Aires Squadron off Montevideo twice between late September and late October 1844. The incidents of the first and major scrape, the subject of a detailed 1969 account in the pages of this journal, appear to be these.[16] Early on the morning of 29 September, *Sancala,* a schooner associated with the Argentine squadron but flying the flag of Montevideo, in pursuit of some blockade-running fishing boats, fired numerous musket shots into an American merchant vessel named *Rosalba.* That ship, which was owned by Silas E. Burrows of *Herald* incident, had anchored near *Congress* to take mail to the United States and was considered by Captain Voorhees to be under his protection.

Learning of the offensive actions by the schooner of questionable origin, Voorhees ordered a boat to capture her and prepared *Congress* to sail into action. When *Sancala* appeared to report to the Argentine flagship before being taken by the American boat, Voorhees bore *Congress* down on the Argentine fleet—a ship, a brig, and a schooner—caused them to strike their colors by firing muskets over them and a gun astern the flagship and captured the three vessels, taking many of their officers aboard *Congress* as prisoners. During that time, some ship, either in the Argentine squadron or connected with it, apparently fired a shot in the direc-

13. Turner to Navy, Montevideo, 24 August, 22 October, 11 November 1843, and enclosed statement by Conover, 15 September 1843, Brazil, Roll 16.

14. Memorandum of Conversation between Turner and Arana made by Dr. Bache, enclosed with Turner to Navy, MV, 11 November 1843, Brazil, Roll 16.

15. Turner to Voorhees, Rio, 17 February 1844, enclosed with Turner to Navy, Rio, 19 March 1844, Brazil, Roll 16.

16. Making good use of the log of *Congress* and court-martial records, K. J. Bauer goes over the actions of the American commander in 'The *Sancala* Affair: Captain Voorhees seizes the Argentine Squadron,' *The American Neptune,* XXIX (1969), 174-86. The story is also told in primary sources used in the preparation of this study: Voorhees to Turner, MV, 29 September 1844, and supporting documents, enclosed with Turner to Navy, Rio, 21 October 1844; Turner to Navy, 2 November 1844 (Turner's official report), Brazil, Roll 17; Arana to Harvey M. Watterson, Special Agent of the United States at Buenos Aires, BA, 6 October 1844, with numerous enclosures; and Watterson to Arana and to State, BA, 11 October 1844, with numerous enclosures, in Manning, *Diplomatic,* I, 237-45.

tion of *Bainbridge*, the other American war vessel in the River Plate. On hearing the temporary commander of the Argentine squadron, Juan Filton, disavow the actions of *Sancala*, Voorhees released those ships and their officers, while retaining in captivity for alleged 'piratical' acts under a false flag that schooner which had begun the firing. Voorhees forcibly freed some Montevidean fishermen held captive in the Argentine ships and released some American seamen whose enlistment in Buenos Aires service he was told had expired.

Even while Commodore Turner was rushing to the scene of this incident and preparing his official report, Captain Voorhees deepened his involvement in the blockade and the displeasure he caused his superiors in the United States Navy, to say nothing of both Argentine and American diplomats. Soon after acknowledging the reestablishment of the Argentine blockade on 5 October 1844, Voorhees charged that, by allowing the French and Brazilians to board their own vessels, Argentina was conducting a selective and hence illegal operation. On 22 October he informed Antonio Toll, a second interim commander of the Buenos Aires Squadron, that while such action continued he could not allow American merchant vessels to be molested. Doubtless wary of Voorhees's proven penchant for direct action, Toll capitulated but complained that demands for exceptions and privileges from American forces 'multiply daily.' Hardly satisfied, Voorhees fired back a note saying that he claimed neither exceptions nor privileges, but fairness and nothing more.[17]

In his official report to the Navy Department and in a conference with Felipe Arana in Buenos Aires, Commodore Turner supported that action of Captain Voorhees which could be classified legitimately as defense of the American flag. Concluding that the whole affair had been brought on by *Sancala*'s firing into *Rosalba*, Turner told his superiors in Washington that the captain of *Congress* was right in capturing her. In his interview with the Argentine foreign minister, the commander of the Brazil Squadron also defended the seizure of *Sancala*, which he continued to maintain had acted in association with the Argentine blockading fleet. Yet, in the end, Turner acknowledged Buenos Aires' refusal to have anything to do with the wayward schooner.[18] His support of a subordinate officer's defense of the flag ended when he accepted the need to satisfy Buenos Aires on the single issue of the temporary loss of its blockading fleet.

Commodore Turner criticized Captain Voorhees for all his actions beyond his seizure of the offending *Sancala*. He held that taking the whole Argentine squadron without prior inquiry was hasty and required apology, that releasing Montevidean prisoners was a totally unjustified abandonment of the strict neutrality with which Turner had enjoined Voorhees, and that taking American seamen out of the Argentine fleet was an act 'similar with the aggressions that England has attempted to perpetrate on ships of the United States.'[19]

In Buenos Aires, the naval commander's presence was secondary to that of Harvey M. Watterson, special agent of the United States in that port city. In late 1843, Watterson had been dispatched to Argentina as the first accredited diplomatic representative in a decade. He had found the government of Buenos Aires eager to receive his mission and the support of the United States as a counterweight to the opposition it faced from Great Britain, France, and Brazil to its blockade of Uruguayan ports. Watterson was little inclined to tolerate actions by a naval officer that would interfere with his object of conveying 'the friendly spirit' of his government and seeking most favored nation status for American commerce.[20] When Watterson talked with Foreign Minister Arana, he regretted the fact that Captain Voorhees had captured the Argentine fleet and said that his government would take steps to preserve justice and honor.

Watterson and Arana, then, agreed on condemnation of a high officer in the United States Navy. At the same time, however, they commended another one, Commodore Turner, for his expression of disapproval of the behavior of Captain Voorhees and *Congress*, as well as his acceptance of the reestablished blockade of Montevideo. The American special agent in fact pointedly said that Turner had helped see to it that the policies of those wishing to pervert friendship between Ar-

17. Voorhees to Toll, 5, 22, 24 October 1844; Toll to Voorhees, 3, 23 October 1844; Voorhees to Turner, 25 October 1844; enclosed with Turner to Navy, MV, 2 November 1844, Brazil, Roll 17; Bauer, '*Sancala* Affair,' pp. 181, 183.

18. Turner to Navy, MV, 2 November 1844, Turner to Navy and to Baltierre, commander of *Sancala*, MV, 20 November 1844, Brazil, Roll 17; Bauer, '*Sancala* Affair,' p. 183.

19. Turner to Navy, MV, 2 and 4 November 1844, Brazil, Roll 17.

20. State to Watterson, Washington, 26 September 1843, Manning, *Diplomatic*, I, 21; Peterson, *Argentina and the United States*, p. 128.

gentina and the United States into hostility 'have been most signally blasted.'[21]

The notions of Argentine-American amity and belligerent rights overwhelmed those of respect for a neutral flag and resistance to defective blockade in Washington as well as Buenos Aires. At the end of December 1844, while Captain Voorhees was being commended for helping free a British naval vessel grounded off Montevideo, the State Department wrote to Chargé d'Affaires William Brent, Jr., successor to Watterson in Buenos Aires, that, although final expression of opinion on the conduct of Voorhees would await an official report from Commodore Turner, it appeared that the captain had acted against orders. Meantime, Brent could express to Foreign Minister Arana the president's deep concern and regret over the occurrences in the estuary. On receipt of Turner's report, the United States would 'do whatever justice and the occasion may require.'[22]

That occasion included submitting Captain Voorhees to an inquiry immediately upon his return to the United States and to a court-martial some months later. In early June 1845, the former commanding officer of *Congress* was tried on the charge of disobeying orders, specifically that part which required his unqualified neutrality toward the Montevidean and Buenos Ayrean governments. The five specifications to the charge of disobedience were that he had seized *Sancala*, captured the Argentine fleet, released Montevidean prisoners from Argentine hands, taken American seamen from the Argentine squadron, and refused that fleet the right to enforce its blockade with respect to vessels belonging to United States citizens. The naval court-martial found Captain Voorhees guilty on all five specifications and sentenced him to a reprimand from the secretary of the navy and suspension from duty for three years.[23]

21. Watterson to Arana, BA, 11 October 1844, Manning, *Diplomatic*, I, 241-42; Arana to Watterson, BA, 7 November 1844, and Watterson to Turner, BA, 9 November 1844, enclosed with Turner to Navy, MV, 20 November 1844, Brazil, Roll 17.

22. Turner to Commodore Purvis, British Forces on Coast of South America, Rio, 11 January 1845, enclosed with Turner to Navy, Rio, 11 January 1845, Brazil, Roll 17; State to Brent, Washington, 28 December 1844, Manning, *Diplomatic*, I, 23-24.

23. Charge and Specifications against Philip F. Voorhees, enclosed with State to Carlos María de Alvear, Argentine Minister to the United States, Washington, 29 May 1845; Navy to State, Washington, 24 October 1845, enclosed with State to Alvear, Washington, 25 October 1845; Manning, *Diplomatic*, I, 26-29; Bauer, '*Sancala* Affair,' p. 184, points out that Voorhees was subjected to two courts-martial, one of which directly resulted from his actions against the Argentine fleet.

After some delay, the State Department in October 1845 conveyed the results of the Voorhees degradation to the Argentine representative in the United States. The secretary trusted that the proceedings and results of the court-martial would demonstrate 'the disposition entertained by this government to respect the rights of Buenos Aires.'[24]

In this second and much more serious encounter of units of the Brazil Squadron with the Argentine blockade in the Río de la Plata, American diplomats from a special agent at the scene through the secretary of state consistently pressed the idea that no provocation permitted action that could interrupt the reestablishment of cordial relations between the United States and the Argentine Confederation. They saw no justification in Captain Voorhees's claim of defense against outrage to the American flag or his charge that the blockade was only selectively applied and hence illegal. Within his own profession, Voorhees found support only for his seizure of the ship which had actually fired on the American flag and that only from Commodore Turner, his immediate superior. Despite that support, the Navy Department included capturing *Sancala* among the specifications to the charge of disobeying Turner's order on which Voorhees was tried and convicted. In the last analysis, the navy went along with the primacy of the Argentine-American friendship.

In his official report on the conduct of Captain Voorhees in the *Sancala* incident, Commodore Turner ignored a point raised by his subordinate that figured prominently in the grief to which yet another American naval officer would come in the Río de la Plata. This was the right of Captain Voorhees to pattern his actions in rejecting the blockade on those of the French. Turner strayed onto that dangerous ground in the third successive challenge which personnel of the Brazil Squadron made to the Argentine fleet and for the second time took part in a contest over naval policy which he could not win.

Commander G. J. Pendergrast was warned against a gross breach of friendly relations between his country and the Argentine Confederation but encountered changes in the belligerent circumstances in the Río de la Plata. The first change was the attempt by Buenos Aires to improve its blockade of Uruguayan ports from partial to strict category. The second was aggressive

24. State to Alvear, Washington, 25 October 1845, Manning, *Diplomatic*, I, 29.

action by the British and French against the Rosas government, including their own obstruction of shipping into the port of Buenos Aires. Pendergrast faced two distinct threats to his country's flag and commerce. With the continuous support of Commodore Turner, he acted the same way in both cases, for which he was both criticized and complimented by an American diplomat and naval authorities of the United States and Argentina.

Commander Pendergrast, who was as his predecessor ordered to maintain strict neutrality in the Río de la Plata and who knew of the *Sancala* incident,[25] found the first challenge to his command in January 1845. The Rosas government ordered a rigorous blockade of Montevideo and Maldonado. From the beginning, the Buenos Aires plans were frustrated. Both the British and French ministers stayed away from the official announcement of the directive. While the British representative gave indications that his government might recognize the strict blockade, the French admiral, apparently fearful that the government of an effectively besieged and blockaded Montevideo would begin to seize foreign property to support its garrison, formally refused to accept the change proposed by Buenos Aires.[26]

When confronted with a disputed attempt by the Argentine Confederation to impose a rigorous blockade on Uruguayan ports, Pendergrast took a position that seemed justified by his duty to protect American interests but at the same time duplicated the French actions. He first informed Admiral Brown that he was disposed to acknowledge the strict blockade once the matter was clear. Then, when he learned of the final French decision, he claimed the same immunities and advantages which their commerce might enjoy. Speaking for his government, Brown rejected that claim. In doing so, he accused Pendergrast of offending the sovereignty and independence of a fellow American state by behaving in the same unjust and abusive manner of the French admiral.[27]

The American chargé at Buenos Aires joined the Argentine admiral in criticizing Commander Pendergrast. In a long and contentious letter, cited numerous times subsequently, Brent charged the naval officer with abandoning neutrality. He said that Pendergrast should have followed his first inclination to acknowledge and abide by the strict blockade, a position he anticipated their government would take. In subsequently claiming exemption for American ships, Pendergrast was unduly influenced by the actions of a 'mere naval officer,' which had effectively ended French neutrality. Pendergrast not only followed a hazardous doctrine but also risked Argentine reprisals against American commerce with Buenos Aires, far greater than that with Montevideo. Moreover, Pendergrast imperiled the objects which the United States sought in sending a chargé d'affaires to Buenos Aires: cultivation of amicable understanding, settlement of claims, and a treaty.[28] While joining in the caution against following third-party example, especially that aimed at another American state, Brent nonetheless went back to the theme consistently followed by United States diplomats in the region in putting friendly relations between his country and Argentina above all other considerations.

Pendergrast brushed aside the objection of the American diplomat and the Argentine naval officer. He was short with Brown, saying only that he was not responsible to a foreign officer or government for his conduct. With Brent he was more circumspect but no less firm. He saw in the chargé's letter no good reason to change his position. His course had always been to respect an equitable strict blockade, but, when the Argentine fleet failed to maintain its belligerent right against the French, his duty was to secure an equally important neutral right and prevent American ships from being excluded from Montevideo under present circumstances.[29] To Pendergrast, respect for his flag, neutral rights, and resistance to defective blockade were as important as belligerent rights, rejection of European intervention, and friendliness between his country and Argentina.

25. Turner to Pendergrast, Rio, 5 June, 19 October 1844, enclosed with Turner to Navy, Rio, 10 June, 19 October, 1844, Brazil, Roll 17.

26. Arana to Brown, BA, 11 January 1845; Brent to State, BA, 28 January 1845, Manning, *Diplomatic*, I, 252, 257; Hamilton to Turner, MV, 31 January 1845, enclosed with Turner to Navy, Rio, 15 February 1845, Brazil, Roll 17.

27. Pendergrast to Turner, MV, 21 January 1845, enclosed with Turner to Navy, Rio, 15 February 1845, Brazil, Roll 17; Pendergrast to Brown, MV, 30 January 1845, Brown to Pendergrast, BA, 19 February 1845, House Executive Document No. 212, 29th Congress, First Session (cited hereafter as Doc. 212), pp. 5, 8-9.

28. Brent to Pendergrast, BA, 11 February 1845, Doc. 212, pp. 10-13.

29. Pendergrast to Brown, MV, 22 February 1845, and to Brent, MV, 1 March 1845, Doc. 212, pp. 10, 14.

Despite the fact that Commodore Turner supported Pendergrast in his exchange with Brent and Brown, the Navy Department in Washington reproved the officer's conduct in refusing to acknowledge a strict blockade that the Argentine Confederation was never able to carry out. Replying in late May 1845 to Turner's explanation and defense of his subordinate's action and correspondence, the secretary found himself compelled to withhold approval and commended Chargé Brent's letter of 11 February. He said that the president thought that Pendergrast should have followed that diplomat's advice.[30]

By the time Turner and Pendergrast were able to reply to the navy's disapproval of their position, the European powers had made the second change in the blockading situation in the Río de la Plata. After building up their naval forces, Britain and France demanded as a condition of general peace an end to Argentine military activity against Montevideo, detained the Argentine fleet in the estuary while driving Admiral Brown into disgrace and retirement, and threatened their own blockade.[31] When that happened, the ambitious American diplomat in the port city first proposed that he mediate between Buenos Aires and the European powers. Rebuffed in this offer, Brent tried to persuade his country's naval forces on hand forcibly to challenge the altered power relations in the River Plate estuary. For his part, Pendergrast made his own protest to the Europeans but refused to be swept along by Brent into direct action. He acknowledged notice of British-French intentions, requested a guarantee of neutral rights for Americans equal to those earlier demanded for English subjects, and objected to the notion that the entire coast of Buenos Aires province could be interdicted.[32]

While trying to cope with the radically altered situation in the Río de la Plata, Commander Pendergrast found it necessary to respond to the navy's disapproval of his earlier actions against the faulty and now disbanded Argentine blockade of Uruguayan ports. Again with the backing of Commodore Turner, the chief American officer in the estuary asked the Navy Department to reconsider its tentative decision on the basis of his full explanation. Trying to pursue a strictly neutral policy amidst confused relations, he certainly would have resisted European infraction of the rights of an American nation had the strict Argentine blockade been impartially maintained rather than degenerate to harassment of only United States commerce. As to not heeding the United States chargé's advice, he respectfully submitted that, because of a Navy Department circular holding commanders abroad solely responsible for their conduct, Brent could not share his odium if he had allowed Americans as neutrals to be deprived of their commercial rights.[33] Principles considered vital and oft repeated—respect for the flag, neutral rights, resistance to defective blockade—stood out in Pendergrast's and Turner's defense of Brazil Squadron actions in the tangled diplomatic and military position of the United States in the Platine estuary.

By the time of the last act of the mid-1840s contest among American naval officers and diplomats, Commodore Turner and Commander Pendergrast were back in the United States. In that final exchange, between February and April 1846, the navy made a distinction between blockades in the Río de la Plata. Resistance to that of one American nation against another was questionable, because Pendergrast had appeared to follow the French lead. Resistance to that of Europeans against Argentina was, on the other hand, applauded. Ignoring faint praise and an invitation to forget the questions raised by the Argentine attempt at strict blockade, Pendergrast skirted the issue of Americans versus Europeans and argued yet again and forcibly that he deserved disapproval only if he had allowed 'outrage on our commerce.' As he had resisted such injury, he claimed approval of both judgment and motives, which would not only benefit him but guide other officers in similar circumstances.[34]

The secretary of the navy concluded the issue. First, he cited those considerations that stood in the way of

30. Turner to Navy, Rio, 9 April 1845, Brazil, Roll 17, and Doc. 212, pp. 3-4; Navy to Turner, Washington, 27 May 1845, Doc. 212, p. 39.

31. Turner to Navy, At Sea, 28 July 1845, Brazil, Roll 18; Brent to State, BA, 1 July and 2 August 1845, Manning, *Diplomatic*, I, 269-70; Peterson, *Argentina and the United States*, pp. 132-34; Teodoro Caillet-Bois, *Historia naval argentina* (Buenos Aires: Peuser, 1944), pp. 417-18.

32. Brent to State, BA, 2 August 1845, Manning, *Diplomatic*, I, 289-91; Brent to Pendergrast, BA, 30 August 1845, Doc. 212, pp. 30-34; Turner to Pendergrast, MV, 19 July 1845, enclosed with Turner to Navy, At Sea, 28 July 1845, Brazil, Roll 18; Pendergrast to S. H. Inglefield [Commander, British Naval Forces in the Río de la Plata], MV, 22 August and 5 September 1845, Doc. 212, pp. 18, 19-21.

33. Turner to Navy, MV, 12 November 1845, Pendergrast to Turner and to Navy, MV, 13 September 1845, Doc. 212, pp. 39-43.

34. Turner to Navy, Norfolk, 26 January 1846, Brazil, Roll 18; Navy to Pendergrast, Washington, 15 February 1846, Pendergrast to Navy, n.p., 4 April 1846, Doc. 212, pp. 49-50.

unqualified approval. They included: a commander of a European fleet forcibly interfered in a blockade set by a friendly American nation; that wrong done by the French while claiming neutrality was no fit example; Brent's proposal to approach the Argentines peacefully for our rights still appeared judicious; and Americans must be clearly guided to avoid even the appearance of cooperating with European interference in American affairs. Second, he said that the department continued to have reservations about Pendergrast's conduct in representing the United States but appreciated his motives.[35]

In the flurry of activity during Daniel Turner's mid-1840s command, three officers of the Brazil Squadron, including the commodore himself, struggled with diplomats and their own superiors over blockading in the Río de la Plata. In these conflicts, all parties from time to time evoked principles to support their opinions and actions. Taken together, those axioms were so basic to American historical lore that, when drawn together, they appeared to be a parade of clichés. Turner began the procession when he told the Argentine foreign minister that his country was prepared to fight as it had done against England to defend the American flag against improper search and seizure. Consul Amory Edwards broached the possibility that Argentine-American friendship might override considerations of respect for the flag. Philip Voorhees lashed out vigorously against perceived attack on his country's flag and refused to recognize a faulty blockade. Turner, Special Agent Watterson, and Argentine Minister Arana all accused Voorhees of abandoning the neutrality he was ordered to maintain, violating the rights of belligerents, and rupturing the friendly feelings between Argentina and the United States. With prodding from the State Department, a naval court-martial agreed with those charges. G. J. Pendergrast followed Voorhees in resisting depredations against American commerce in a defective blockade. Chargé Brent, the navy, and Argentine Admiral Brown reproached him for following the example of a European power meddling improperly in Western Hemisphere affairs.

For their part in the struggle with policies and diplomats, the three naval officers directly involved got much criticism, slight punishment, and even some praise. Pendergrast sustained only a mild reprimand from the Navy Department, which also congratulated him on the successful completion of his cruise and lauded his patriotic motives. In that, he appeared to fare better than his predecessor as senior American commander in the Río de la Plata. Captain Voorhees was, after all, court-martialed and sentenced to suspension from service. But Voorhees summoned enough political support to reverse that sentence and later served an undistinguished term as commodore of the Pacific Squadron before being denied further employment by the navy.[36] Commodore Turner had his own direct encounter with diplomats and policies and involved himself approvingly or disapprovingly in the encounters of his subordinate officers. He went through the mid-1840s events and repercussions unscathed, for his superiors in Washington affixed a notation to one of his letters entirely approving his conduct while he was commanding officer of the Brazil Squadron.[37]

The contests had more significant impact on the squadron as a whole. While the navy's April 1846 letter to Commander Pendergrast may have been the last of its kind directed to an officer of that unit for a number of years, commanding officers became more cautious in giving and receiving orders for service in the Río de la Plata. To be sure, caution permeated instructions given subordinates in the period under consideration in this paper. But so did contradiction and vagueness. Officers, as seen, were routinely ordered to respect the rights of belligerents and yet prevent 'outrage to our flag.' They were told to be very careful in their dealings with the governments at Buenos Aires and Montevideo and to maintain neutrality in the fight between them, but given no guidelines for coping with the blockades that were such a part of that struggle. After Voorhees and Pendergrast, orders became clearer and sharper. For example, when in January 1846 Commodore Laurence Rousseau ordered Commander H. Henry to take *Plymouth* to the River Plate, he gave him lengthy and detailed instructions for the regulation of his conduct. These included the object of *Plymouth*'s being in the region, the general policy of peace his government wished to follow toward the South American nations, how to recognize and cope with both legal and illegal

35. Navy to Pendergrast, Washington, 14 April 1846, Doc. 212, pp. 50-51.

36. Bauer, '*Sancala* Affair,' p. 184; R. E. Johnson, *Far China Station: The U.S. Navy in Asian Waters, 1800-1898* (Annapolis, Maryland: Naval Institute Press, 1979), pp. 47-48.

37. Undated note attached in Washington to Turner to Navy, Rio, 15 August 1844, Brazil, Roll 17.

blockades, how to deal with the British-French intervention, how to handle American merchant ships without proper registers, and the need to confer with United States diplomatic and consular representatives.[38] Moreover, Brazil Squadron commodores themselves got specific and detailed orders from the Navy Department, which included a definition of a 'lawful,' as opposed to a 'mere paper,' blockade.[39]

The engagement of the Brazil Squadron and some of its officers with diplomats even had some small effect on United States policy with the Platine republics. It is true, however, that at no time during the 1840s did the United States direct primary attention to South America. Even when concerning itself with European intervention in the New World, the administration of James K. Polk looked primarily to the west, not south.[40] Yet American agents in Buenos Aires throughout sought the resumption of formal ties between the United States and the Argentine Confederation. Consul Edwards cited the need for a fully diplomatic representative at the same time he lamented Commodore Turner's intrusion in the *Herald* incident. Just such a true diplomatic representative, Chargé Brent, spoke of the possibility of a treaty while denouncing Commander Pendergrast's refusal to accept the Buenos Aires attempt to raise its faulty blockade from partial to strict category.

While pursuit of a treaty with Argentina faded in the late 1840s, it was revived in 1852 and 1853. Once again Brazil Squadron personnel became involved in blockading and diplomatic problems in the Río de la Plata. While American representatives vigorously and successfully sought the first treaty between the United States and Argentina, they accused a captain of the squadron of both jeopardizing their efforts and disgracing himself and his service by dipping into the murky waters of intra-Argentine intrigue.[41]

38. Rousseau to Henry, Rio, 20 January 1846, enclosed with Rousseau to Navy, Rio, 20 January 1846, Brazil, Roll 19.

39. Navy to George W. Stover, Washington, 18 August 1847, *The New American State Papers: Naval Affairs* (Wilmington, Delaware: Scholarly Resources, 1981), III, 54-57.

40. Peterson, *Argentina and the United States*, pp. 138-39; Cady, *Foreign Intervention*, p. 192.

41. Peterson, *Argentina and the United States*, pp. 145-49; C. S. Foltz, *Surgeon of the Seas: The Life . . . of Surgeon General Jonathan M. Foltz . . .* (Indianapolis, Indiana: Bobbs-Merrill, 1931), pp. 162-66.

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They Were a Class Apart

The Story of Life Aboard One of the Four-Stack Flush Deck Destroyers in the Years Between the Two World Wars

HENRY G. PETTITT

OVER fifty years ago, in the spring of 1926, the small city of Newport huddled on a corner of Narragansett Bay. On the seaward side the 'cottages' of the millionaires stared impassively from the cliffs. The sparkling waters of the bay mirrored the ships of the U.S. Navy Scouting Fleet which in the slack tide of the moment, were tugging every whichway on their cables. Soon the tide would turn and they would all line up in precision, awaiting the signal to get underway.

Just west of the town the Naval Training Station spread her green lawns and the stately masts of the venerable frigate *Constellation,* flanked by a bevy of brass stacked, steam launches, presented an old-time naval port to rival Portsmouth, England. The small steam launches were used in tactical exercises by the officers in training at the Naval War College whose grey facade domineered the drill field.

As a recruit at the Naval Training Station, I was particularly fascinated by the two squadrons of flush deck four-stack destroyers which tied up each weekday evening at buoys off the Torpedo Station. Several at a time would moor alongside the tenders U.S.S. *Dobbin* and U.S.S. *Whitney*. Each weekday morning, shortly after colors, the bay would resound to the three whoops of each ship's siren followed by the blast of her whistle. This signified that the vessels had slipped their moorings and were underway.

Out they streamed past the lighthouse in orderly columns for the daily operations. Sometimes they would be accompanied by light cruisers such as the U.S.S. *Concord* and U.S.S. *Trenton*. For those of us who had elected to 'go down to the sea in ships' this was an inspiring sight as we marched back to barracks past the *Constellation* with her tall masts. One could imagine the ghost of Commodore Truxton standing on the quarterdeck shading his eyes toward the departing fleet.

While awaiting assignment to the Radio School at Hampton Roads following 'boot' leave, I visited one of the destroyers. It was a Sunday afternoon, and I picked a liberty boat at random at Government Wharf in Newport. I have long forgotten the name or number of this particular destroyer, but not forgotten was the yacht-like appearance of the ship in her Sunday dress; the light grey paint, the shadow etched numbers on her bow and the thin strip of shiny boot topping that ran along her waterline. I was greeted by the gangway watch and asked to stay topside only. Wandering up the port side I peered into the large brass port of the radio room and saw the shiny coils of the spark transmitter and a pair of U.S.N. Type 1420 reflex radio receivers which brought my textbooks to life—envisioning the day that I would actually operate similar equipment.

When someone mentions the greyhounds of the sea, the thought brings to mind the 273 ships of this class which were built just before and during World War I. Their prime identifying feature was the flush sheer line of the main deck which differed from the high forward deck and low main deck aft of the smaller destroyers and torpedo boats which preceded them. Their sea-keeping ability was excellent despite their narrow beam and high speed. Here was a vessel which delighted the eye of your true seaman. A real scale model battleship equipped with the most effective armament of her day and age! It took nearly two years of schooling and duty

aboard the U.S.S. *Dobbin* before I realized my ambition to serve aboard a four-stacker.

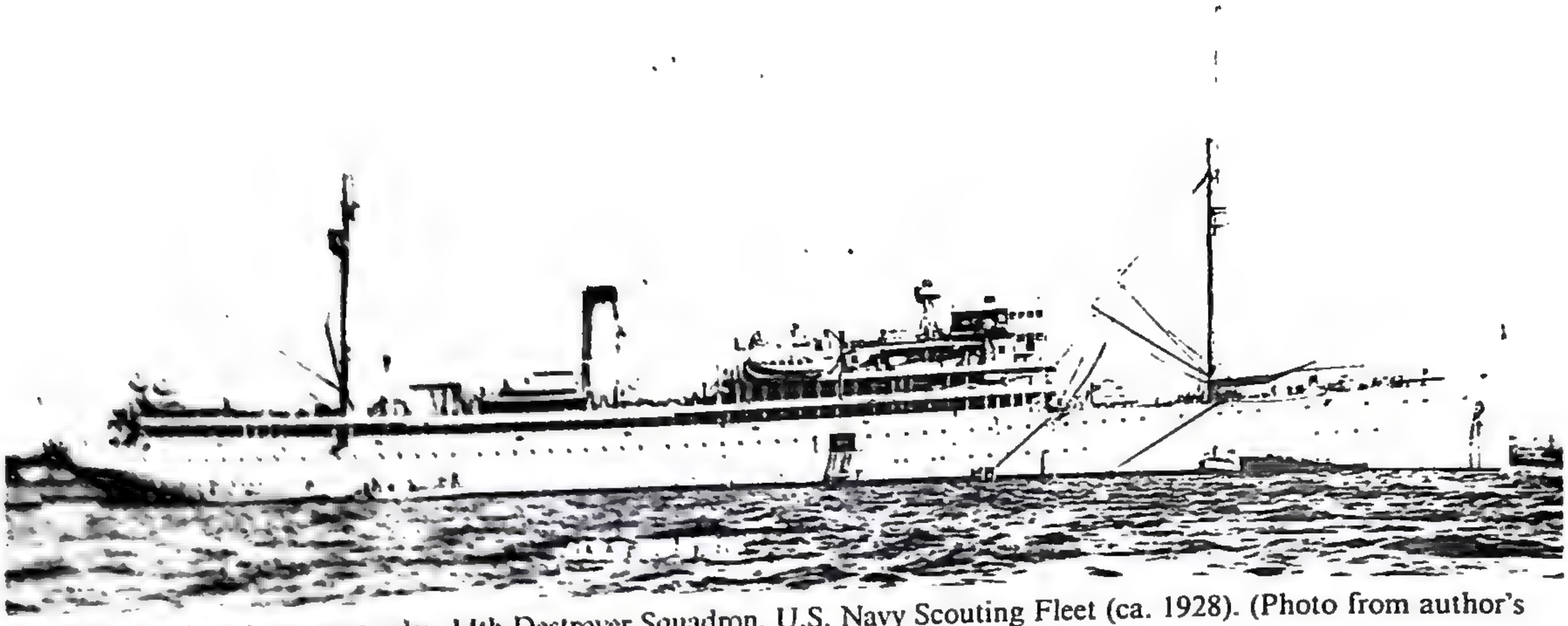
As a radioman aboard the *Dobbin* we stood watch handling traffic with the ships of Destroyer Squadron 14 and with the flagship of the scouting fleet. The *Dobbin*, a large tender, followed the squadron to Guantanamo Bay, Cuba, in the winter; spring and fall at Charleston, South Carolina, and Newport in the late spring and summer.

It was about this time that our farmer president, Calvin Coolidge, decided that radio modernization of the fleet was too expensive. The Navy Department in frustration and a burst of energy decided to do the job themselves. Many of the destroyers were laid up in mothballs, but the two squadrons of the scouting fleet and the several squadrons of the Pacific Fleet remaining in service were repaired by the various tenders and some navy yard work. This was a backbreaking experience and in my memory of the wholesale modernization of the radio installations aboard the eighteen *Desron* 14 destroyers is one of long, cold hours in the Hudson River, the Cooper River at Charleston and at Newport. The squadron maintained its schedule of exercises notwithstanding, releasing those it could spare on a tight limitation of two weeks alongside the tender. Two destroyers at a time would come alongside the tender. Most of the crew were given leave and the augmented repair gangs of the *Dobbin* set to work. The radio repair gang of the *Dobbin* worked around the clock. The whole radio room was stripped of equipment. Out went the outmoded spark transmitter, the raw A.C. intermediate transmitter and all the receiving gear. New equipment included a 'modern' two-kilowatt General Electric Model TD-2 transmitter, an intermediate frequency transmitter and a shortwave transmitter. Three new superheterodyne miniature tube receivers were installed and new motor generator sets were mounted opposite the gyro room aft of the forward crew's compartment. A bank of Edison Type storage batteries was installed in a cabinet on the well deck with the charging panel modified to the ship's 130-volt DC return ship's electric power. Yards of heavy armored cable were strung and clamped to the bulkheads. New antennae were installed, and when the ship left the side of the *Dobbin* we all ran up to the radio room and contacted the ship on her three frequency bands to check performance. This was a moment of extreme anxiety on our part as the returning crew of

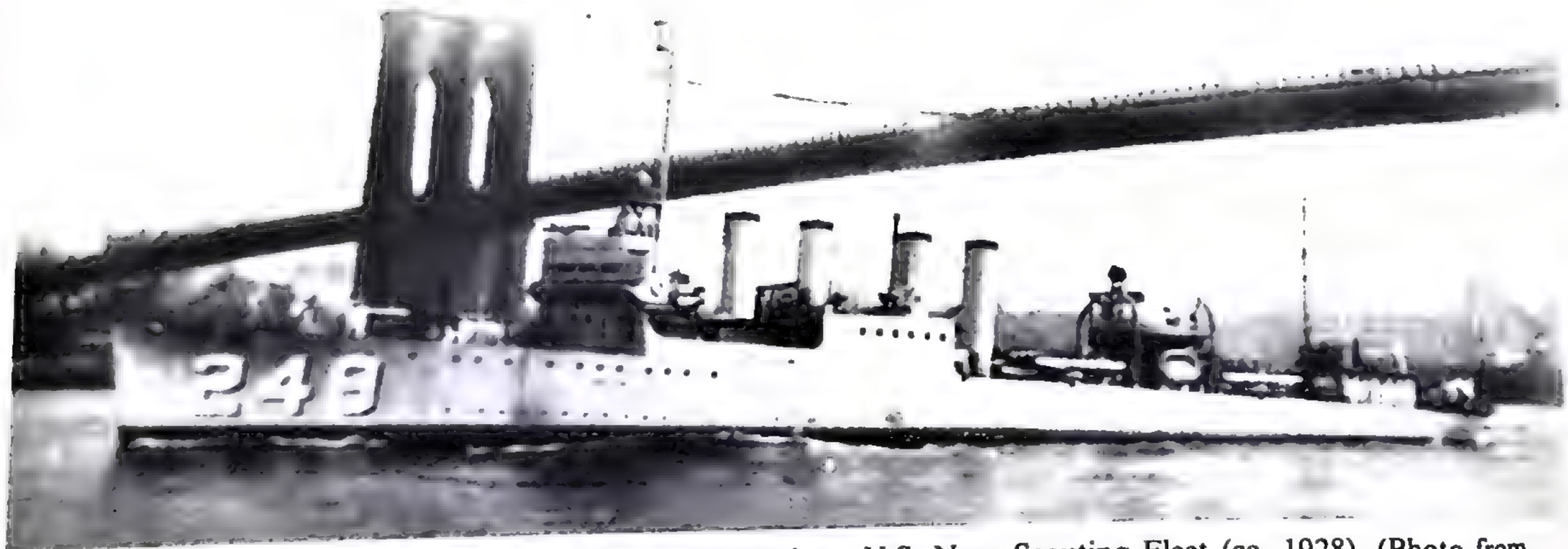
The author, 1928. (Photo from author's collection.)

the destroyer had little time to become accustomed to the new equipment. Fortunately there were only minor problems, which seemed the norm when the Navy undertook a project under their own control. The extent of training was excellent, though exhausting, but the Navy ended up with radiomen, artificers, electricians and other ratings with experience far in excess of that gained in ordinary routine work. A chief radioman (Red Rutherford) and I were the last of the original working crew on the radio installations of the *Desron* 14 ships, during which time I had earned another petty officer rating. Like everything else this was gained at the expense of many mistakes, countless callouses, blisters and the addition of questionable words to my vocabulary which took years of civilian life to forget. Our department head on this project was a venerable chief warrant officer, Mr. Bixby, much admired by all of us.

Among the eighteen ships of Destroyer Squadron 14



U.S.S. *Dobbin*, destroyer tender, 14th Destroyer Squadron, U.S. Navy Scouting Fleet (ca. 1928). (Photo from author's collection.)



U.S.S. *Hopkins* 249, squadron leader, 14th Destroyer Squadron, U.S. Navy Scouting Fleet (ca. 1928). (Photo from author's collection.)

was the U.S.S. *Hopkins* 249. She was named after a Revolutionary War naval officer and was commissioned on 21 March 1921. I was lucky enough to obtain a transfer to the *Hopkins* and spent the next two years aboard her. As a prototype the *Hopkins* was similar to the vast majority of ships of this class. These were peacetime days in the Navy. The vessels were maintained at their best, but were spartan in the extreme compared to destroyers of the modern Navy.

The purpose of this narrative is to take the reader aboard to experience some of the life styles that contributed to high morale and pride of service in those days so long ago. Memories of the people, places and events come flooding back as they were instilled during our most formative years. The ship's company engaged in all manner of housekeeping jobs so that the vessels shone like newly minted coins. Decks and bulkheads were painted and repainted; canvas awnings and dodgers were scrubbed white, and the crew was in the uniform of the day whenever not actually doing manual work. Competition with the other vessels was jealously defended and the engineering 'E' on a stack was a symbol of pride to the black gang.

At sea underway in one of the many power runs where oil consumption was indexed against other squadron vessels, life became an entirely different experience. The rolling, pitching ship curtailed major galley activity to sandwiches and coffee. Water at the scuttlebutt was rationed to a quarter of a bucket a day. A simple ritual of brushing and rinsing teeth first—then a face wash with the remainder saved for laundering one's clothes which were rinsed in salt water. Finding a place to dry our laundry was always a problem underway. The clothes lines were just aft of the stacks which bestowed a layer of soot at times, and if the chief engineer got permission to blow tubes to clear the stacks, God help the poor sailor whose white jumpers were on the line. Many means were employed to dry clothes. The forward boiler room presented one, but this required permission from the firemen and water tender plus gratuities such as extra copies of the daily press news from radiomen, extra food from the galley and favors from other ratings.

Press news was copied in the radio room every night while underway. These were the days of typewriters and carbon paper, so a considerable amount of work was entailed. The officers and the crew eagerly awaited these sheets each morning and if static was bad, the radiomen on the night shift had a rough time of it. The original copy, usually two pages, went to the captain. The second went to the wardroom, the third to the chief petty officer's quarters and the fourth to the crew's bulletin board. Not officially required, but of equal importance was the second batch of carbons which were distributed quietly to the galley, the fireroom, and wherever thought expedient in the life of the ship. This ensured a supply of coffee for the radio room, a pie now and then, the use of the fireroom and other amenities. The second batch of news, although mostly identical to the first, contained items of a fictitious nature designed to stir up certain crew members who were avid followers of sports, notes about the hometowns of crew members, etc. One of the memorable characters in the black gang was a fiery redheaded fireman from Alabama. He possessed a short temper and resented comments by us concerning Alabama. After one particularly ridiculous statement about his home state, he would show up at the door to the radio shack, a copy of the press news in hand and a woebegone expression of disbelief on his face. Finally, the executive officer, Lieutenant Richardson, put an end to these irrelevant items by dropping a quiet word to us.

Lieutenant M. T. Richardson was the man we put our trust in when things got rough. In a bad blow off Cape Hatteras, it was a comfort to know that he had the con. He was a strict disciplinarian, but fair in every way. He never lost his temper with the enlisted men, but I remember him lacing out a playboy-type ensign who we had aboard for a short time. The crew called him, behind his back, 'Little Dick,' as he was short in stature. Lieutenant Richardson, according to shipboard gossip, was a mustang officer up from the ranks and if this was true, he had a hard road to travel. In 1926 the Academy men had tremendous influence on the careers of officers. The wartime reserve officers and ninety-day wonders had left the Navy and the ROTC officers were mostly located in the specialist ranks and seldom encountered in the destroyer squadrons.

At the beginning of World War II, a news release stated that a Captain M. T. Richardson and his squadron of destroyers had departed rapidly from an Australian port on a secret mission. If he or those close to him come across this narrative, they should know the esteem we of the peacetime navy had for him in those long years ago.

There was one ensign who served as communications

officer on the *Hopkins* for a short time. He had a habit of sticking his head in the large port over the operating desk of the radio room on his way to his morning stroll on the forecastle. John Sees, the senior first class, and I had a cigar box filled with a mixture of Sir Walter Raleigh and Blue Boar tobacco which provided a very pleasant pipe smoke. Our ensign would greet us with a cheery 'Good morning,' fill his pipe from the cigar box, and say, 'Fine tobacco, boys.' He would then head for the forecastle and his morning walk. John and I discussed this routine and decided to do something about it. We then placed the tobacco from the cigar box in another container, hidden from the port, and proceeded to dump the contents of the two pencil sharpeners into the cigar box with a sprinkling of Sir Walter Raleigh to give it a tobacco-like fragrance. The next morning our ensign appeared shortly after quarters, greeted us cheerfully, filled his pipe and wandered forward. In a very few minutes he returned framed in the port. Surveying each of us for a few moments he said, 'You dirty bastards!' No other repercussions ensued, but never again while he was aboard did he sample our tobacco.

I should like at this point to describe briefly the U.S.S. *Hopkins,* and I would like to give credit here to Commander John D. Alden, U.S.N. (retired) for his assistance on several questions and for references to his definitive record of the 273 ships of this class which served the Navy and this country so well from just before World War I to the close of World War II.[1] It is sad to relate that not a single one of these ships, the only distinctive American Warship type, exist to this day. This applies as well to the fifty destroyers given to Canada, England and Russia just before our entry into World War II.

These vessels differed only slightly, depending on the years when they were constructed, and to minor changes instituted from time to time. Their tonnage varied from 1,125 to 1,370 tons displacement. The World War II changes were the most radical, with displacement up to 1,700 tons and conversion of many of them to destroyer-minelayers or auxiliary vessels.

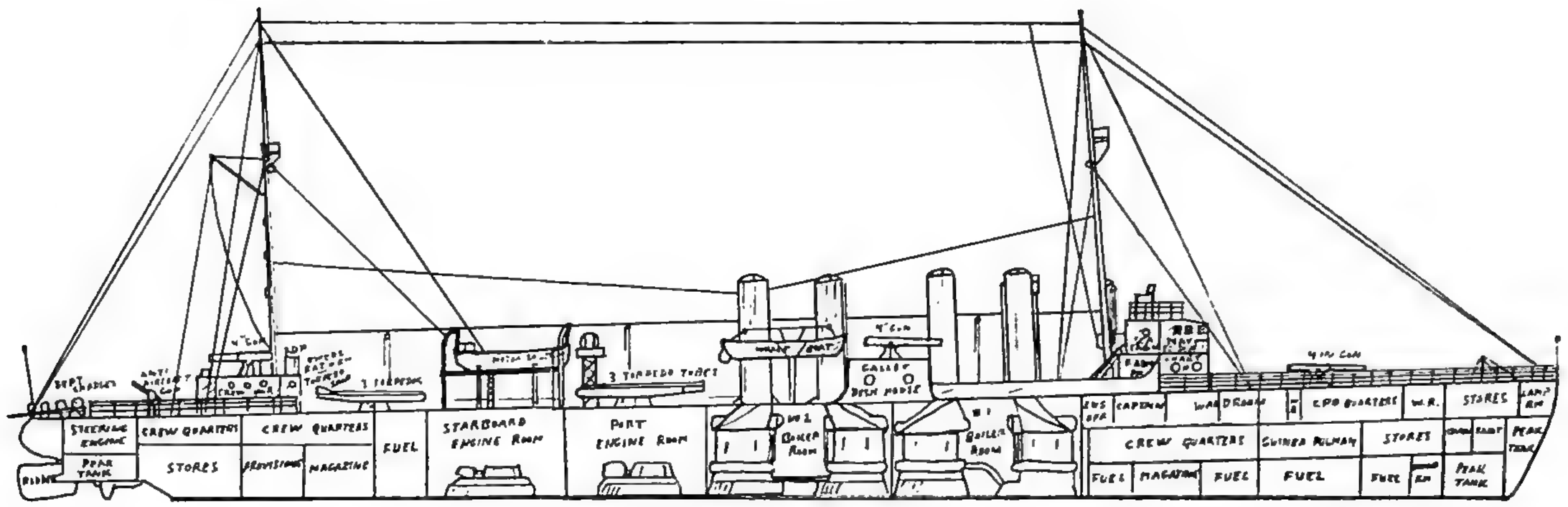
Getting back to the *Hopkins,* she was similar to the majority with four 4-inch fixed ammunition guns and some 314 feet in length. In the 14th Destroyer Squadron, the *Hopkins* was designated a squadron leader and an extra cabin had been provided on the starboard side adjacent to the chart room and directly opposite the radio room. This cabin provided quarters for the commodore when he chose to leave his more spacious quarters on the *Dobbin* and go to sea with us. The title then of commodore was honorary and went with the command of a squadron of ships. His usual rank was that of a senior captain. In the British Navy his opposite number was called 'Captain Destroyers.' We also had five destroyers in the squadron with four 5-inch guns. I do not know if these used fixed ammunition, but if they didn't, gunnery drill must have been hectic, particularly on the limited space on top of the galley deckhouse. The number four gun on these five ships was mounted on the fantail instead of on top of the after deck house as was the case with the rest of the squadron.

Although almost all of these ships were identical in general appearance, there were certain characteristics which identified them to us as we certainly got to know them all quite well. The U.S.S. *Hatfield* 231 had for a time a hotshot skipper who handled his ship like a racing car. Our deck crew was always apprehensive when the *Hatfield* came alongside. She approached faster than other ships—backed down rapidly and threw over all her lines at the same time. As soon as the gangplank was placed, the captain with his handbag dashed across and over to the outboard vessel, or the *Dobbin,* to go ashore. He was known as an avid liberty lover.

My transfer to *Hopkins* had been effective in the late fall of 1927, and I reported aboard in the Brooklyn Navy Yard which was her home port. We were scheduled to leave with some of the ships of the squadron after New Year's Day for Guantanamo Bay, Cuba. During the few weeks before departure we were busy getting the radio shack in order since the equipment was a recent installation and several details remained to be ironed out. Our new receivers had to be calibrated, which was done with the aid of a Heterodyne Frequency Meter or Crystal Calibrator. In those days crystal control of transmitters was not common and our transmitters would be calibrated, once we left the Navy Yard, by beating them against our pre-calibrated receivers.

Most of the radiomen in the 14th Destroyer Squadron were known to me as a result of contacts while aboard *Dobbin,* and as our problems were somewhat similar, a close comradeship existed which lessened the

1. John D. Alden, *Flush Decks* and *Four Pipes* (U.S. Naval Institute, 1965).



Starboard profile, U.S.S. *Hopkins* 249 (HGP 1984).

differences which were bound to develop with eighteen ships working more or less in common.[2]

Our captain, Lieutenant Commander Hammes, was interested in broadcast radio reception which was in its infancy in those days. Several times he took me along with him to Courtlandt Street in downtown New York City. This street was known as Radio Gyp Row and was a mecca for the radio enthusiast. One of the captain's desires was to pipe the reception from his homemade broadcast receiver in the wardroom to the forecastle deck to provide music during our movie when we arrived in southern waters. He picked out a heavy Jensen loudspeaker in a fancy wooden cabinet. The speaker was self-powered with an AC/DC power pack which we later modified aboard ship to operate on the ship's 130-volt DC supply. The captain left me to bring the speaker via the subway to a dock near Gravesend Bay where the *Hopkins* along with some other ships of the squadron were anchored prior to departure. It was a difficult job getting the heavy, unwieldy speaker to the municipal pier in Brooklyn where the ship's boat was to meet me, and I was very glad to get it hoisted aboard that night.

Life aboard the *Hopkins* was spartan indeed! Although yacht-like in appearance, these ships were no bed of roses—especially underway. No lounges or libraries graced the quarters for officers or men. The wardroom couch and armchairs afforded a bare minimum of comfort, but for the enlisted men, their bunks sufficed and were a compensation for the swung hammocks then prevalent in the larger vessels of the Navy.

Taking a tour of the ship from the bow where the two kedge anchors were stowed on sloping billboards, one found a small hatch leading below by ladder to an area of miniature storerooms. One of these was a small canteen presided over by Pharmacist Mate 'Doc' Smart. Here we could purchase candy, shaving gear, toothpaste, etc. Unlike the modern Navy, there were no soda fountains, laundry facilities or recreational equipment.

Next along the foredeck was the companionway to the chief petty officers' quarters. These men were the backbone of the ship. Each was a specialist in his particular responsibility and was backed up, with a high degree of cooperation, by the rated and nonrated enlisted men. Technical changes in the Navy at this time resulted in the development of the service schools of

2. A chief radioman, John Christianson served aboard U.S.S. *Lawrence* 250 and the tender *Dobbin* during the time period of this narrative. This writer worked for John for nearly eleven years in civilian life when he was in charge of American Telegraph and Telephone Company's Rocky Point Long Island long-wave Radiotelephone Transmitting Station.

World War I to a much broader scope, eliminated to some extent the 'striker' method of training aboard ship. Schools of this type were established at Hampton Roads, Virginia, and San Diego, California, and advanced schools with training for chief petty officers and warrant grades were rapidly being expanded. The Radio Materiel School at Anacostia was an excellent example. Instructors from that school in later years helped establish the Capitol Radio Engineering Institute in Washington, D.C., which topped the list of schools in this category for many years.

Just aft of the four-inch gun on the forecastle was the main deck structure of the chart house, flanked by the radio room on the port side and the commodore's cabin on the starboard. The bridge deck surmounted these three cabins. Above the enclosed portion of the bridge deck was a small open deck where the range finder and firing control equipment were located. A small sea cabin was located on the back of the control bridge and in turn was flanked by the flag hoist bins.

When operating in concert with the squadron, the bridge deck became crowded and if laying smoke for screening of the capital ships, the atmosphere became quite hectic. When flanking movement occurred, the ships would disappear for a time in the rolling banks of smoke, and I can remember on one occasion that the U.S.S. *Fox* 234 collided with the port bow of the U.S.S. *Williamson* 244. When we returned to harbor a conference was called aboard the tender *Dobbin*, and all the radiomen and signalmen that had been on watch at the time presented their logs to determine what happened. I have long since forgotten which vessel was at fault, but as the signal bridge of both vessels was obscured by smoke, the radio logs disclosed that the execution of a tactical order on one of the two vessels was recorded inaccurately. These smoke laying operations were hairy experiences. Fortunately there were no injuries and structural damage was slight and quickly repaired by the tender *Dobbin*.

Aft of the bridge structure was the double companionway to the officers' deck which included the executive office, officers' galley, wardroom, engineering office, captain's cabin and officers' staterooms. The title stateroom is rather farfetched inasmuch as these cubicles contained two bunks each with a small folding writing desk and a wash basin. The showers were located at the forward end of the passageway, one on each side. Since it was peacetime, most of the officers' cabins housed a single officer with the extra man sharing the cabin of the junior officer.

The starboard companionway extended two decks down to the forward crew's compartment. Just aft of the base of the companionway were located the Sperry gyro compass room on the port side and the radio motor generator room on the starboard side. These were not rooms actually, but merely screened-in enclosures. Bunks for the deck division were along both sides of the larger crew quarters with folding mess tables down the center. Just forward of this compartment was the petty officers' quarters (radiomen, signalmen, quartermaster mates, boatswain mates, torpedoman and gunners' mates). This compartment which was my home for two years, was called the Guinea Pullman and was so called after a similar arrangement in the British navy where the petty officers supplemented their food ration with a sum of money approaching a guinea in British currency. Everyone ate however in the main crew's compartment as there were no mess tables in the Guinea Pullman. Instead, another row of triple bunks had been installed along the center line.

A glance at the sketch of the ship will show that the officers' quarters were almost directly above these two crew compartments. This led to a sensitive situation, as some of the young officers would lower bottles of beer from their ports at night to cool them. Some of the crew members would reach out and snare the strings, bring the bottles inboard, open and drain the contents and fill the bottles with water, recap them and lower them back into the sea. When a bottle was seen or heard ascending to the officers' quarters, all hands would assume disinterested or sleepy poses and if an officer dashed down the companionway, he could detect no untoward activity. I don't know what he could do about the situation since our captain was very strict in enforcing the prohibition established in the Navy at that time by the Secretary of the Navy. No beer or wine could be stored in the ship's refrigerators or quarters, for if it did it was extremely short-lived! Two similar crew's quarters were located aft of the engine rooms for the firemen, artificers, water tenders and associated ratings.

Food on these destroyers started out fairly good upon leaving port, but declined in variety the longer we were at sea. Storms curtailed galley activity to a minimum and at one time in memory all the deck stores of potatoes, onions and the like were washed over the side.

We had been at sea for five weeks on an extended operation and ended up for liberty in Cristobal Colon at the Atlantic side of the Panama Canal. Half of the ship's company was given liberty at once and they headed for the nearest restaurant. All the officers except one left with them and the remaining officer at sundown turned the ship over to the chief quartermaster. Unbeknown to both of them was the fact that most of the remainder of the crew had dwindled away by means of the bumboats. Fortunately for all concerned, there were no problems. *Hopkins* swung quietly at her buoy and the crew returned during the early morning hours. Steam pressure was shortly brought back to normal, but a very quiet and subdued crew straggled to quarters the next morning—inspected by an equally somber and weary-looking group of officers.

The well deck just aft of the bridge structure was a crowded area containing the ship's refrigerator, the freshwater fountain known as the Scuttlebutt, the electrician's storage cabinet and an arms chest. Just aft of number two stack was the galley deck house. This was a rigid steel enclosure extending from the starboard to the port side. An inside passageway on each side provided means of communication with the after portion of the main deck. The deck house contained the ship's galley and an area for storage of topside gear. It was not recommended that the port side be used for traffic as the mess attendants used this area to peel potatoes, line up their mess kits and generally obstruct the passageway. The well deck contained two of the four stacks. A ladder on the starboard side ascended to the bridge deck and another ladder allowed access to the top of the galley deck house where two 4-inch guns were mounted. A practice loading device was mounted here so that some gun drills could be performed without removing the canvas covers from the guns. Another ladder descended to the deck aft, flanked by an ammunition ready-chest. Below this ladder and protected somewhat by the overhang of the deck house and number three stack, a work bench and machine lathe were provided and maintained by the machinist mates. Along the decks were the blower intakes and airlocks leading to the two boiler rooms. Air was maintained at pressure in the boiler rooms to create proper draft and varied directly in proportion to the vessel's speed and consumption of steam. When one of these destroyers was underway, really the only sound she made was the roar of these blower fans, and a practiced ear could almost determine the speed of the ship by the pitch of the blowers. Each boiler room contained two banks of boilers with individual updrafts to the stacks.

The two engine rooms contained two Parsons steam turbines with a combined horsepower of 27,000. The after engine room powered the starboard propellor shaft and the forward engine room powered the port propellor shaft. These power plants and boilers varied somewhat in rated horsepower, but the *Hopkins* was generally rated at the 27,000 hp which produced a top speed of around thirty-two knots. Some of the ships recorded speeds in excess of thirty-seven knots, but thankfully *Hopkins* never tried to reach those heights. We had enough trouble with bulkhead gear falling off and hot bearings as it was! The operating standard speed of twenty-six knots seemed to be the ideal for keeping station and forestalling major breakdowns.

The deck aft of number four stack contained the ship's secondary armament which comprised twelve torpedoes' tubes arranged in four groups of three tubes each. These four batteries of torpedoes were each controlled by a training wheel so that they could be directed in an arc of some 160 degrees parallel to the side of the ship. There were two batteries on each side of the ship placed so as to provide room for the ship's boats' davits.

To digress for a few moments, we would like to mention that some of the ships were known Jonahs and had more than the normal breakdowns to the turbines or boilers, particularly on leaving port. One of these was the U.S.S. *Sturtevant* 240 which broke down on leaving port on several occasions. She seemed to hate leaving her comfortable berth and ideal liberty port. When she did get down to the southern drill grounds or Guantanamo Bay, she performed in a very satisfactory manner and her radio gang was a cheerful bunch.

While we are talking about *Sturtevant*, I must tell you about her famous goodwill visit to Savannah, Georgia. It seems that the chief radioman had become engaged to the daughter of the mayor of Savannah, and the Navy thought it appropriate to send his ship to that city for the ceremony. *Sturtevant* steamed up the Savannah River and tied up to a pier somewhere along where the present embankment is located. Almost to a man, the crew attended the wedding and the chief radioman was sent off on his honeymoon in great style. These were prohibition days, but good corn whiskey was obtainable everywhere at twenty-five cents a pint. The crew was certainly in no condition to get underway,

but finally the time arrived and some dignitaries and a brass band came down to the pier to send them off.

The *Sturtevant* was moored securely to the pier, as the Savannah River has a strong tide current at certain times of the day. Orders were shouted from the bridge to let go the breast lines. When this was done amid the noise of the spectators and the blaring of the band, the order was given to let go both the bow lines and the stern lines which had been doubled for protection against the current. Somehow the stevedores on the dock did not get the stern lines off in time and the ship veered away from the pier into the outgoing current. The bridge thought they heard through the racket that the stern lines were clear and telegraphed the engines one third ahead. The gallant *Sturtevant* promptly pulled the bollard off the pier along with a section of the dock and some of the band members fell into the river. There was a great deal of shouting, dashing about and whoever had the con spent more time looking aft than ahead of the ship and she proceeded to run aground on the opposite side of the narrow channel!

A day or so later at high tide the ship was pulled off, undamaged, by a tug and proceeded to sea. This tale undoubtedly gained in the telling, but in the Scouting Fleet it was generally considered to be the finest liberty imaginable.

Located on the deck in the engine room vicinity were the davits for the ship's boats. The boats included a 26-foot gig, a 36-foot motorsailer and a double-ended lifeboat. The lifeboat was swung from davits just aft of the galley deckhouse. When underway the lifeboat, or whaleboat as it was called, was swung outboard for instant launching in case of an emergency. A bridle checked the boat from swaying. The other two boats rested on chocks between the davits with the gig on the port side and the motorsailer to starboard. The chocks were elevated to provide headroom on deck. A searchlight tower was installed between the two engine room hatches. This was standard on ships with four-inch guns. On the few ships with five-inch guns, the after gun was mounted on the fantail and the searchlight was located on top of the aftermost deckhouse which contained four rooms, a torpedo repair shop, and the crew's head on the starboard side; an emergency radio room and the crew's washroom on the port side. The emergency room (in 1927) contained a small 1/4 kilowatt spark transmitter and a 1420-type receiver coupled to a radio direction finder loop on the roof of the deckhouse. Power for the emergency radio room was provided by a small gasoline generator. This generator was a bit cranky to start, and it was my duty to start it up just prior to Captain's Inspection to ensure that it would start if he should request it. One Saturday morning in Guantanamo Bay I went aft to the emergency radio room and started the gas generator for a warmup. I always checked the exhaust pipe on the port bulkhead on deck to be ensured that no one had his back to it before cranking. On this particular morning, Lieutenant Goldsmith, our communication officer at that time, made a hurried check of the deck area aft and outfitted in his white uniform complete with sword, passed by the exhaust just as the engine kicked over. The exhaust had a habit of accumulating rusty water mixed with soot which sprayed our lieutenant with a goodly pattern of rusty, dirty water. He was furious but controlled his temper in a gentlemanly manner.

The torpedo repair shack was mostly a storeroom for torpedo parts and supplies. Torpedoes were stored either in their mounts or below the deck in the after magazine with the warheads removed. A three-inch antiaircraft gun was mounted on the fantail. Two racks of depth charges were installed, one on each side of the stern flagstaff and canted about 30 degrees into the wake of the ship. When laying depth charges, this area was a cold wet place to stand as the ships always steamed at top speed to ensure that the depth charges would not explode near the fantail.

The head or crew's toilet was an interesting and very fundamental installation when viewed in retrospect. It was simply a long trough running along the bulkhead inside the deckhouse. Sea water was pumped in one end and was discharged into the sea at the other end. A series of plain wooden seats were mounted on the trough, separated from each other by small panels about shoulder height. A favorite prank of some of the mischievous members of the crew was to wait until all the seats were occupied and then set fire to a wad of toilet paper which was set adrift down the trough. This always caused an outbreak of profanity seldom outdone in this hemisphere!

This was the fundamental layout of a vessel sparse in accommodations for the officers and men—but loved in a way by all hands. Unlike the U.S.S. *Caine* of Herman Wouk's novel, these ships were maintained with spit and polish and a degree of discipline designed to produce a team atmosphere between the officers and

men. Captain's Mast was more instructive than punitive on the *Hopkins*, and a far cry from the punishment dealt out in the past in the American and British navies. There were occasions when a summary or general court-martial was ordered, but not in this writer's experience in the 14th Destroyer Squadron. I do remember that we picked up a prisoner at Colon for transportation to New York. He had been sentenced by a general court on the old U.S.S. *Pittsburgh* in the Philippines. He was given the freedom of the ship as soon as we were underway, and unknown to us was his habit of drinking large quantities of a face lotion that contained a large amount of alcohol. About midnight in the Caribbean, he suddenly dashed aft and leaped over the rail into the sea. A member of the crew emerging from the head saw him leap and passed the word to the bridge. The *Hopkins* blew her whistle in the prescribed 'Man Overboard' signal, swung in a wide arc, dumping papers in the radio room on the deck and dishes in the galley. We proceeded to a point quite a bit back of his estimated leap into the sea and, slowing, followed our previous wake with all hands manning the rail and the whaleboat trailing alongside. It was an excellent 'Man Overboard' drill and the culprit was shortly hoisted dripping and cursing on to the well deck where the master at arms promptly shackled him to a stanchion. Upon arriving at the Brooklyn Navy Yard he was turned over to the marine detachment on board the receiving ship, the venerable U.S.S. *Seattle*.

During the winter months of January, February and most of March, the Scouting Fleet operated out of Guantanamo Bay. The 14th Destroyer Squadron and its sister squadron, the 9th, spent several weeks at a time in the bay of Gonaïves, Haiti. Evenings anchored off the village of Gonaïves in the shadow of the forbidding mountains were memorable. At night fires sprinkled the mountainside like hundreds of fireflies. The throbbing of the native drums caused the very air to vibrate, with our young minds constantly aware of the mystery of this faraway place.

During those years a U.S. Marine constabulary force policed Haiti. Needless to say, our decks were always guarded at night to prevent thievery as the bumboats would glide silently alongside in the dark. During the day, when anchored, a bevy of these colorful boats surrounded each ship selling fruit and handcrafts. Most radio rooms in the squadron had a hand of bananas hanging in a corner.

One memorable night we got underway with a division of destroyers for night battle practice. During the previous day a number of rafts had been anchored in a line towards Port au Prince. These rafts had lattice and canvas screens mounted which would visibly depict the passage of a shell through them. The dummy projectiles were painted with various colors so that the ship or gun firing them could be identified. The paint would leave marks on the canvas and lattice. Competition between the gun crews was always very keen and everyone was alert when they were in turn, hoisting the red burgee and the red topmast lights and starting down the range. A seaplane from the cruiser U.S.S. *Trenton* hovered over us and we in the radio shack were in contact with him. Suddenly the scout plane burst forth with the code for 'Range Afoul' which was passed hurriedly to the bridge. Our siren blasted the air in the cease fire signal to those in the van, and with searchlights ablaze, we scampered down range to see what had happened. We found that a beer lugger travelling from Port au Prince to Gonaïves was stalled in the water near one of our rafts and the crew to a man was in the water hanging on to the bilge rail which ran alongside the hull. There was no apparent damage to the vessel, but they had seen the passage of shells over their heads into the nearby target raft and thought that they were next to be blasted out of the water. It took a considerable amount of discussion by a French-speaking officer on the destroyer ahead of us to reassure them that we meant no harm. The ragged sails of the lugger certainly looked an awful lot like our target raft! This incident provided table talk for quite a while and like all navy stories, gained much in the telling. Our mess always included one or two men who kept our young minds riveted to tales of the China Station and other incidents in the worldwide travels of the 'Old Navy.' In retrospect I should have given much for a modern tape recorder which would have provided tales to rival the stories of Conrad and Kipling.

Mess time, or 'Chow Down' as it was called, was a cheerful, pleasant interlude, especially when we were enroute to a liberty port. Those who had been there before regaled us with stories of their experiences and created a magic atmosphere which seldom turned out as described. There were memorable moments ashore, however. Once in Charleston, the ladies of the Navy League sponsored a dance for the squadron at one of the famous old meeting halls in town. I was on the com-

mittee to help the ladies decorate the hall and they had provided several very large punch bowls which were being filled with orangeade, lemonade and a local fruit punch. This table was located near a doorway and to my surprise, I noted several sailors crowded together near the bowls doing something that the ladies at the other end of the hall could not see. Walking over to the group I encountered a sailor, not on the committee, who told me promptly to 'bug off' which I did, but not before noting that they were dumping the contents of 2 one-gallon jugs of corn whiskey into the punch. They quickly slipped out the door and later with a couple of volunteers, I sampled the punch. It was excellent! That evening was an especially sprightly affair. I believe that most of the ladies enjoyed the punch, or if they didn't they kept the secret well!

When I first reported aboard the *Hopkins*, I was met by a genial electrician's mate who asked me if I had ever operated a motion picture projector. Admitting that I had, he offered to turn the job over to me, stating that there would be a few extra dollars a month for me from the Ship's Service Fund. Trying to make a good first impression, I agreed and found myself enmeshed in a situation that interfered with most of my liberties when in port. I had to make regular trips to the *Dobbin* to draw new films. Many of them required extensive mending. I found that no one on the ship had any knowledge of operating a projector, or if they did would not admit it. I remember that one film starring Clara Bow, a favorite with the men, broke down in the midst of a sensitive scene. The railing from all hands convinced me to find another operator as soon as possible. Fortunately, a new radioman was scheduled to join the ship and I met him at the gangway and outdid my electrician friend.

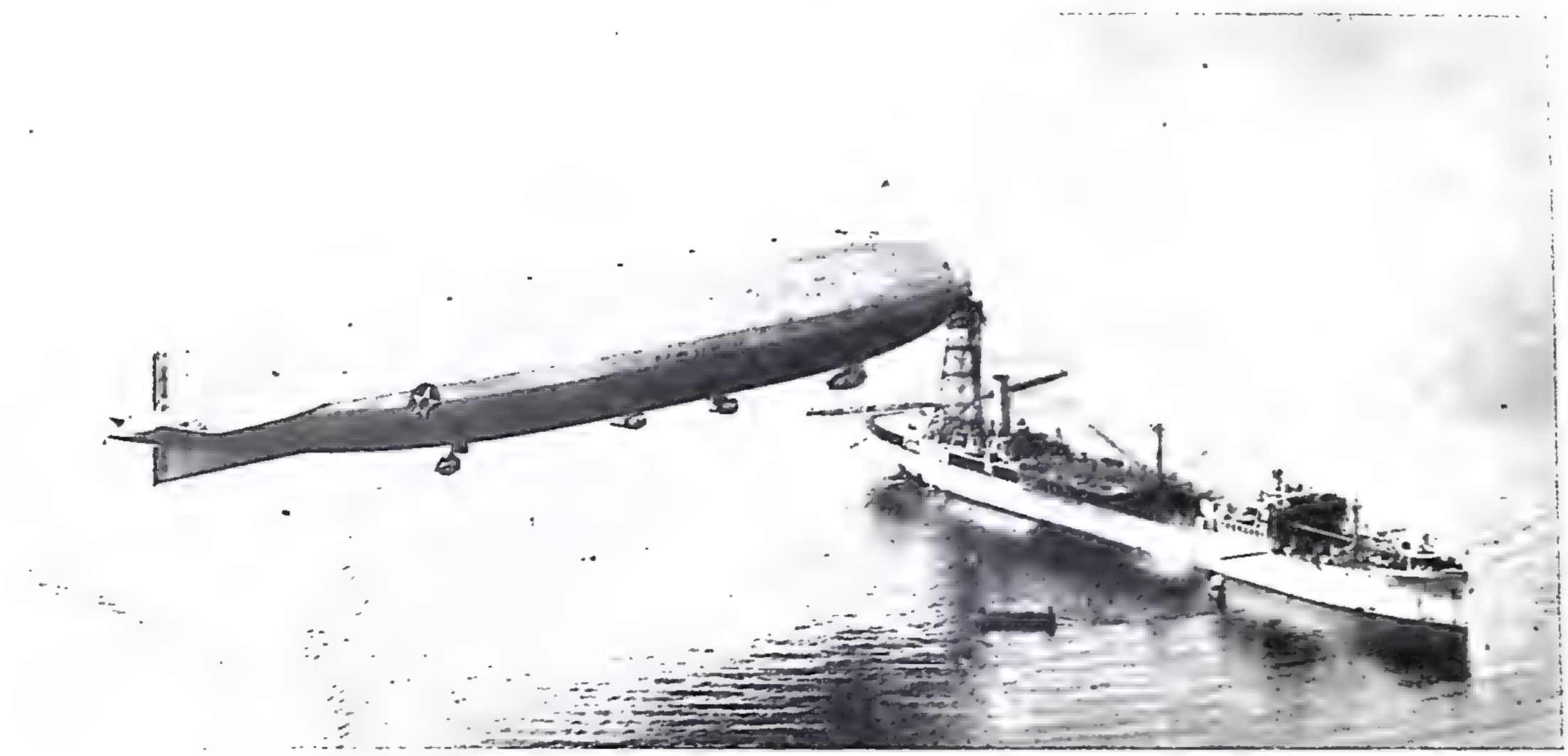
The captain's loudspeaker and the wardroom radio provided some music on the forecastle when in Newport or Charleston, but reception was impossible in Cuba. We had, as most ships did, a few good voices among the crew. One young man of Welsh descent, had an exceptionally good voice, and with his guitar gave us many a pleasant moment during the movie reel changes.

Naval aviation was in its infancy in those days. The U.S.S. *Langley*, a former fleet collier, had been converted into an aircraft carrier. When she showed up we knew that a destroyer or two would be assigned to rescue duty as the heavy early byplanes had a habit of staggering down the *Langley*'s deck and falling into the sea. The Navy had more success with the flying boats of the scout seaplane variety and the heavier craft such as the NC-4. We occasionally were assigned to guard the flight plan of one or more of these planes, monitoring their radio telegraph frequency and dashing off to rescue the crew when they were forced down. One of these rescues occurred off Nantucket and we towed the disabled plane into Newport. The naval aviators were of a different cut than our line officers, one of them sitting on the deck of the radio room drinking our coffee and regaling us with tales of the budding service. Some interest was stirred up in the radio gang about the new service which needed radiomen, and at least one of our staff volunteered for it. Two fellow schoolmates of mine at the Hampton Roads Naval Radio School lost their lives in the *Akron* and *Macon* disasters.

The destroyers of our squadron had several admirable features which were never quite matched by the new, heavier destroyers that were beginning to join the fleet. They could almost leap from a standstill into flank speed without a moment's waste of time, turn on the proverbial dime and by reversing screws come to a halt for all the world like a cowboy's horse. The files of the Navy are full of the work these ships have done around the world in their over forty years of operation. They rescued hundreds of Armenian refugees from the Black Sea racing through the Bosporus; offloading those fleeing from volcanic eruptions; ferrying supplies to disaster areas. One time we thought we were going to replace a disabled Coast Guard cutter on the ice patrol and as we were not equipped for this cold duty, a sigh of relief passed through the ship when the assignment was cancelled.

One day while we were anchored off Newport, a strange-looking vessel steamed into the bay and anchored in the main channel. She appeared to be a converted oil tanker and her name was the U.S.S. *Patoka*. Mounted aft on her main deck was a large tower heavily guyed to the deck. Our questions were answered the next morning when the Navy dirigible U.S.S. *Los Angeles* glided up the channel and was moored to the tower on the *Patoka*. Our cameras became busy with this unusual scene which I believe was unparalleled in the annals of the Navy. The next day, a strong wind blew up and the airship hastily unhitched from the tower and headed back to Lakehurst.

The squadron returned to the pattern of those days,



U.S. Navy Dirigible *Los Angeles* moored to U.S.S. *Patoka*, Narragansett Bay (ca. 1928).
(Photo from author's collection.)

taking reserve cruises out of port and engaging in regular fleet exercises. The Navy, with the exception of the War College, has left Newport. Gone are the ranks of four-stack flush deck destroyers and remaining only are the indelible memories of our youth.

Henry G. Pettitt, who once served as a radioman in the United States Navy, retired from the American Telephone and Telegraph Company in 1973. He worked with AT&T's overseas radiotelephone service for forty-two years. Pettitt has engaged in radio communications with ships of the United States and foreign nations, and has been involved in the management of AT&T's overseas radio stations. He has published several magazine articles and two books concerning various aspects of the navy and merchant marine. One book, entitled The Radiomen, *is about early radiomen who pioneered overseas radiotelephone systems. Pettitt is a member of the Steamship Historical Society of America, a professional member of the National Writer's Club, and a thirty-year member of the United States Power Squadrons.*

Moby-Dick: The Two 'Missing' Prints by 'H. Durand'

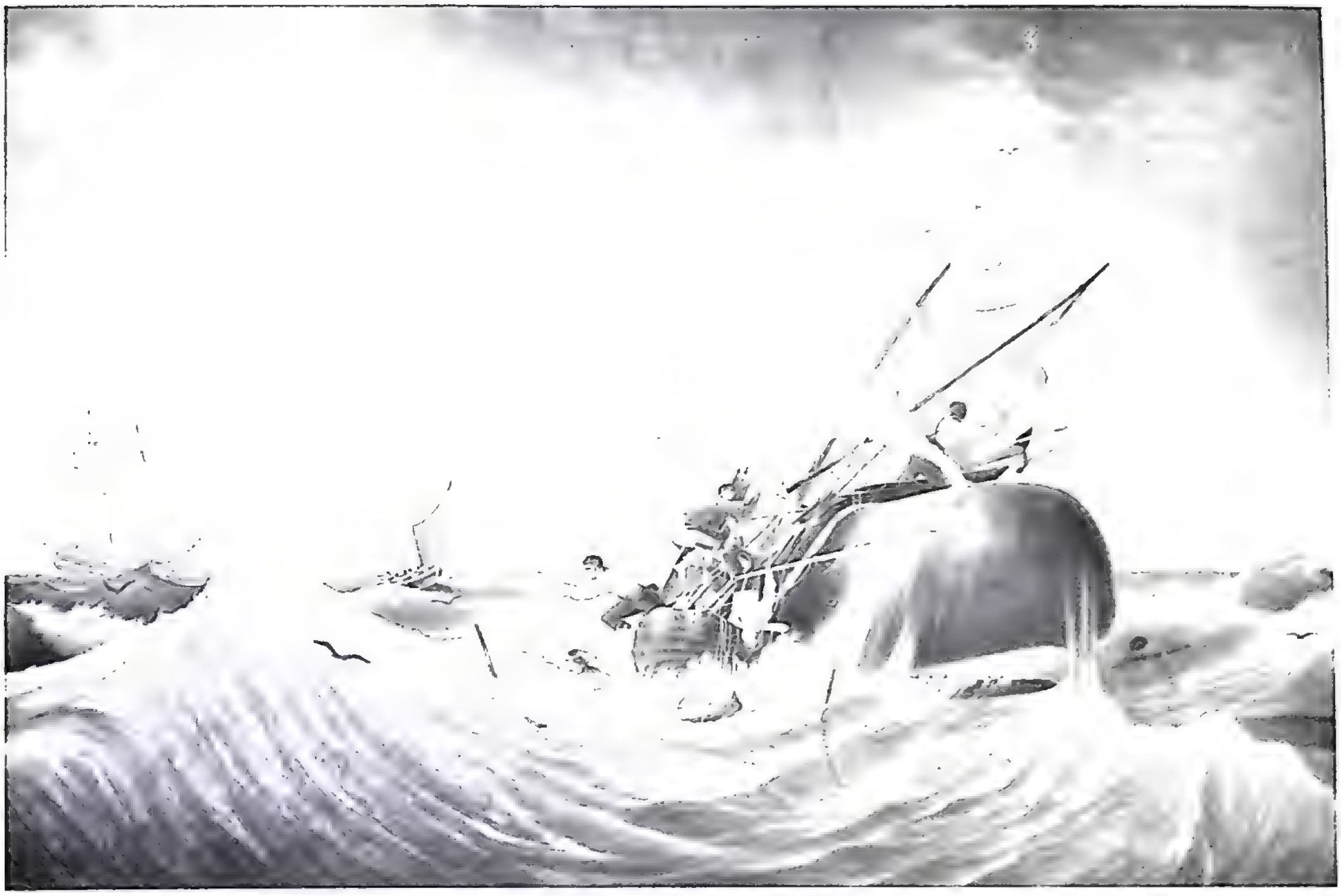
STUART M. FRANK

MOBY-DICK, published in 1851, was never a popular or commercial success during its author's lifetime, and had receded to a profound obscurity long before Herman Melville himself departed this mortal coil. Such little notoriety as the author attained accrued early in his career as the result of his first book, *Typee* (1846), an exotic tale of captivity among the Marquesan islanders in the Valley of the Typee, loosely expanded from Melville's own experiences as a Yankee whaleman 'on the beach' in the South Seas. This earned him a tenacious reputation as 'the man who had lived among the cannibals,' but failed to win him a tenacious readership, wide critical attention, or any substantial income from his subsequent works. He died in relative obscurity in New York in 1891, a reclusively retired customs official, with the unpublished manuscript of *Billy Budd* left a jumble in his desk, and with only minor obituaries in the press. It was not until some three decades later that a courteous interest in the centenary of the little-known writer's birth (1919) mushroomed into a major renaissance of interest in Melville's newly-discovered literary virtues; thus, *Billy Budd* was assembled for publication and *Moby-Dick* canonized as a Classic greater than which no American art may ever have been wrought.

By contrast, French painter Ambroise Louis Garneray (1783-1857), whose whaling scenes Melville so much admires in *Moby-Dick*, was venerated in his own time as a leading practitioner of his art in that fair, Gallic land where, in Melville's opinion, at least, whaling pictures achieved their nineteenth-century quintessence. Paris-born Garneray was a rough-and-tumble sailor and adventurer turned painter and author. Having shipped to sea at thirteen, he was captured by the British on the coast of Africa while serving in Napoleon's navy, and was taken to Portsmouth as a prisoner of war (1806-1814). Upon his return to France, he rapidly established himself as an artist and wrote narratives of his exploits. Named 'Peintre de Marine' (1817), curator of the Rouen Museum (1833), and Chevalier of the Legion of Honor (1852), he is placed at the head of the French marine school in Amédée Gréhan's popular patriotic series, *La France Maritime* (4 vols., 1837 *et seq.*). In later editions of that work, not only are several of Garneray's heroic paintings engraved as plates, but also—uniquely among the artists represented—his biography and a portrait by François Auguste Biard.

Melville, who in *Moby-Dick* confesses or feigns ignorance of the esteem in which Garneray was already held in Europe ('Who Garneray the painter is, or was, I know not'), also places him in the forefront of painters of whaling scenes: '. . . Taken for in all, by far the finest, though in some details not the most correct, presentations of whaling scenes to be anywhere found, are two large French engravings [*sic*], well executed, and taken from paintings by one Garneray. Respectively, they represent attacks on the Sperm and Right Whale' (*Moby-Dick*, chapter 56). Melville's favorable remarks have been frequently quoted by way of endorsement, and have generated for Garneray a fame perhaps far in excess of what his work in this instance might otherwise have occasioned. Whatever the independent merits of Garneray's art may be, now that Melville's reputation outweighs that of his French precursor the painter is remembered largely as the artist whom Melville preferred and whose work the Whaling Bard praised above all others. The result is that Garneray's two aquatints, *Pêche du Cachalot* [Sperm Whale Fishery][1] and *Pêche*

1. *Pêche du Cachalot. Cachalot Fishery* [Sperm Whale Fishery]. Aquatint, drawn by Ambroise Louis Garneray, originally engraved by Frédéric Martens, printed and published by Goupil & Vibert, Paris, 1834; image size 23¼ x 32 inches. Severally reissued and widely copied in colored and uncolored versions in England, France, Germany, and America, notably by Edward Duncan (London, 1836) and by Currier & Ives (New York, 1857). Illustrated in Brewington, nos. 197, 9-10, 109, 237; Ingalls, nos. 199, 115, 299, 301; Frank, nos. 60, pp. 70-71.



'A noble Sperm Whale . . . in full majesty of might.' *Pêche du Chacalot—Cachalot Fishery* (Sperm Whaling), aquatint, 23½ x 32 inches, drawn by Ambroise Louis Garneray (1783-1857), engraved by Frédéric Martens, and published in Paris in 1834. The image was widely copied and often reissued in Europe and America, notably in an adulterated version by Currier & Ives (New York, 1857). (Courtesy, The Kendall Whaling Museum, Sharon, Massachusetts.)

de la Baleine [Right Whale Fishery],[2] contemporaneously issued in French and English editions and then widely copied in Europe and America by the likes of Currier & Ives,[3] are now the most sought-after and the most readily recognized whaling scenes in the history of the genre, and are taken (whether in calendar art or in illustrated editions of *Moby-Dick*) to epitomize the whaling industry in the Age of Moby-Dick.

Yet in all the sea of critical and biographical literature generated since the Melville revival first took root in the 1920s, among which virtually every sentence that Melville ever wrote and virtually every particle of his personal life and professional career have been examined and reexamined in microscopic detail—in an ocean of prose exceeding in volume the literature about any other single writer save Shakespeare; in all the myriad essays and biographies dissecting Melville's experiences, reading, research, literary sources, personal interactions, and daily movements, no one has heretofore successfully attempted to anthologize the illustrations

2. *Pêche de la Baleine. Whale Fishery* [Right Whale Fishery]. Aquatint, drawn by Ambroise Louis Garneray, originally engraved by Frédéric Martens, printed and published at Paris, 1835; image size 23¾ x 32 inches. Like the preceding, this image was often copied and frequently reissued in adulterated English, German, French, and American versions, notably by Edward Duncan (London, 1836) and by Currier & Ives (New York, 1857). Illustrated in Brewington, nos. 196, 8, 62, 108, 202, 234; Ingalls, nos. 198, 114, 160, 161, 205, 298, 300; Frank, nos. 61, pp. 72-73.

3. The earliest American versions were not issued until after the publication of *Moby-Dick;* see notes 1 and 2, above.

'A large running Right Whale, that rolls his weedy back in the sea like some mossy rock-slide.' *Pêche de la Baleine—Whale-Fishery* (Right Whaling), aquatint, 23¾ x 32 inches, drawn by Garneray, engraved by Frédéric Martens, and published at Paris in 1835. Even more than its sperm-whaling companion-piece, this image was often copied on both sides of the Atlantic. The attribution of an oil painting in the Peabody Museum purported to be Garneray's original rendering of this scene is uncertain. (Courtesy, The Kendall Whaling Museum, Sharon, Massachusetts.)

and pictures specifically mentioned in the 'pictorial' chapters of *Moby-Dick* (chapters 55-57) wherein the allusions to Garneray appear. Nor has anyone previously identified 'H. Durand,' the other French artist whom Melville praises in the most complimentary terms, and brought forward his two whaling scenes that Melville describes in such detail, to establish their connection to *Moby-Dick*. It seems extraordinary that this other artist, who if he were only known would be regarded as a kind of kindred spirit with Garneray, has remained obscure all these years, all but ignored by Melville biographers and critics.[4]

4. In his landmark pioneering work, *The Trying Out of 'Moby-Dick'* (Boston: Houghton Mifflin, 1949, *et seq.*), Howard P. Vincent presents the Garnerays and other interesting illustrative materials, but makes no mention of Durand. Sumner W. D. Scott, in his doctoral thesis *The Whale In 'Moby Dick'* (University of Chicago, 1950), labors over the artist's identity, lights temporarily upon the correct reference, then rationalizes an argument that 'H. Durand' is probably the imaginary literary creation of Melville. Incredibly, this constitutes virtually the entire literature to have grappled directly with the issue heretofore.

While Melville does not yield to Durand the place of preeminence among painters of whaling scenes, interestingly, he introduces and describes the prints themselves without the professional caveat applied to Garneray, that, despite their excellence with respect to action and mood, Garneray's prints are 'not the most correct' with respect to anatomical detail. Melville has nothing but praise for Durand:

> In addition to those fine engravings from Garneray, there are two other French engravings [*sic*] worthy of note, by some one who subscribes himself 'H. Durand.' One of them, though not precisely adapted to our purpose, nevertheless deserves mention on other accounts. It is a quiet noon-scene among the isles of the Pacific; a French whaler anchored, inshore, in a calm, lazily taking water on board; the loosened sails of the ship, and the long leaves of the palms in the background, both drooping together in the breezeless air. The effect is very fine, when considered with reference to its presenting the hardy fishermen in one of their few aspects of Oriental repose. The other engraving is quite a different affair; the ship hove-to upon the open sea, and in the very heart of the Leviathanic life, with a Right Whale alongside; the vessel (in the act of cutting-in) hove over the monster as if to a quay; and a boat, hurriedly pushing off from this scene of activity, is about giving chase to whales in the distance. The harpoons and lances lie levelled for use; three oarsmen are just setting the mast in its hole; while from a sudden roll of the sea, the little craft stands half-erect out of the water, like a rearing horse. From the ship, the smoke of the torments of the boiling whale is going up like the smoke over a village of smithies; and to windward, a black cloud, rising up with earnest of squalls and rains, seems to quicken the activity of the excited seamen (*Moby-Dick*, chapter 56).

Perhaps owing to their rarity, these intriguingly-described prints were not identified until, fortuitously, they were recently acquired by the Kendall Whaling Museum, where they are the only documented specimens in any maritime museum in North America. It turns out that the artist has ever been well known and well regarded in France; and once the prints are considered in light of Melville's prose, the identification becomes obvious and unequivocal.

Jean-Baptiste Henri Durand-Brager (1814-1879), a slightly older contemporary of Melville, was, like Melville, an accomplished mariner before he became an accomplished artist. However, unlike Melville, he did not relinquish his career at sea. In the merchant service from youth, Durand ascended through the ranks to become a distinguished deepwater captain in the French merchant service, making numerous voyages to northern Europe, the Mediterranean, and West Africa. Meanwhile, he studied painting and drawing with the celebrated seascape painter Théodore Gudin (1802-1880) and marine artist Eugène Isabey (1804-1886). He first exhibited at the Paris Salon in 1840. That same year, he participated in the historic expedition to St. Helena to repatriate the mortal remains of Napoleon, about which Durand published a narrative and illustrations (1843-1844). The whaling pictures to which Melville refers were produced in conjunction with Durand's two-album series on the French maritime, circa 1844-1845. Many of his later pictures were of naval and patriotic subjects, a few of which were selected during his own lifetime to hang in the great hall of the Palace of Versailles.

The scene Melville characterizes as epitomizing the 'Oriental repose' of a whaler taking on water in the tropics is indeed entitled *Baleinier au Mouillage* [Whaler at Anchor]. Durand is known to have visited frequently and traveled widely in Africa, and to have painted scenes of Senegal, but is not known to have been in the East Indies or the Pacific; it is therefore presumed that the coast of Africa served as his model for this languid tropical revery, whether or not he intended it to represent whalers in the Pacific (as Melville surmises). The plate is cut so as to accommodate by the judicious application of hand coloration the flag or ensign of any nation the publishers might select.

The superbly rendered scene Melville describes as 'in the very heart of the Leviathanic life' is unmistakable from the description in *Moby-Dick*. The extremely fine draftsmanship, printing, and coloration are superior to most of the best efforts of contemporaneous British and American artists; moreover, the accuracy and precision of detail with regard to naval architecture, cetacean anatomy, and flensing technology surpass even Garneray, which may account for why Melville places this print last in his ascending order of favorites at the end of chapter 56, where he sets the stage for his account of depictions of whales and whaling 'graven by the fishermen themselves.'

ACKNOWLEDGMENTS AND BIBLIOGRAPHY

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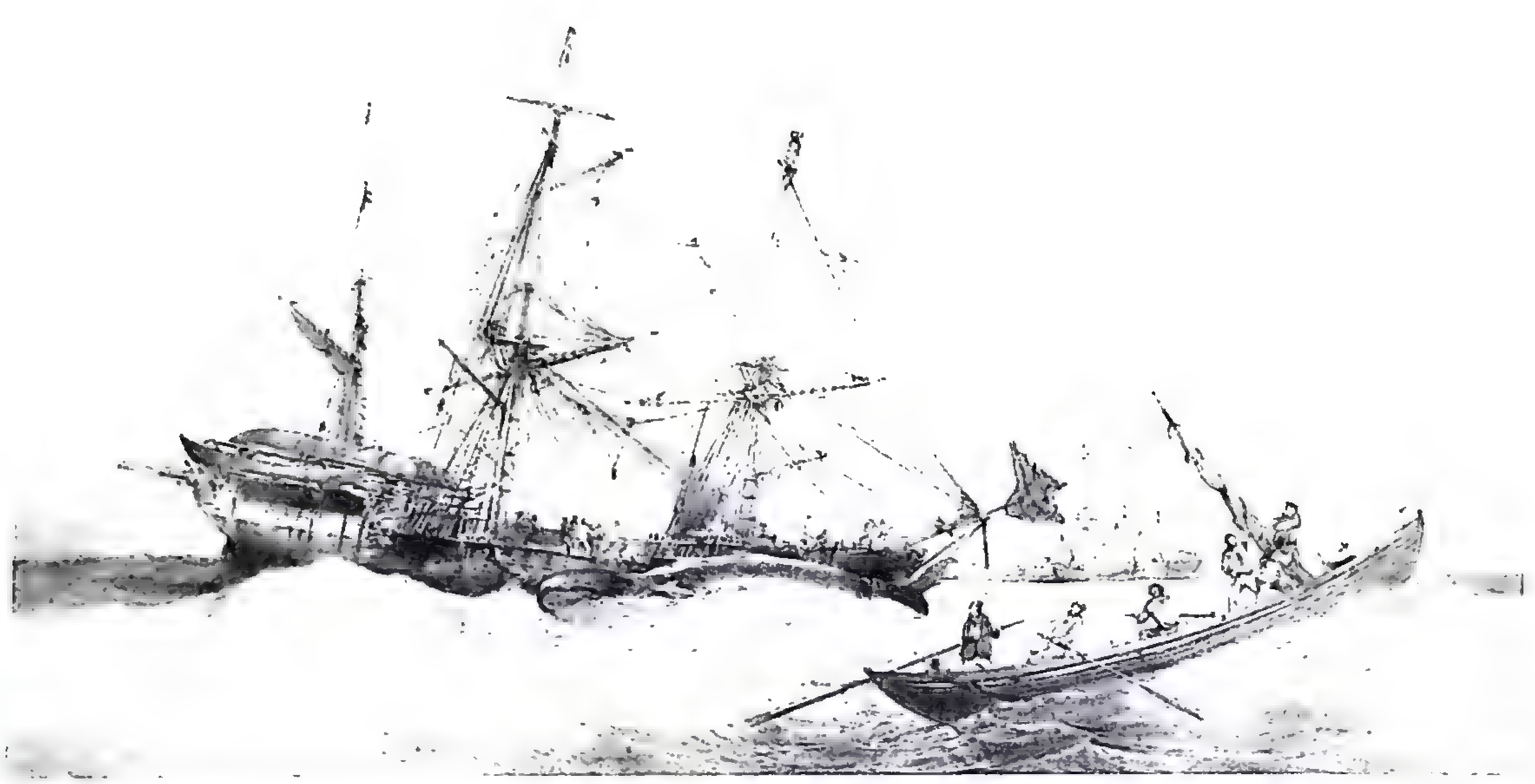

'In the very heart of the Leviathanic life.' *Baleinier Français en Pêche* (French Whaler Fishing), colored lithograph, 10⅛ x 15⅛ inches, drawn by Henri Durand-Brager (1814-1879), printed by Thierry Frères and published by Gihaud Frères, Paris, ca. 1844-1845. (Courtesy, The Kendall Whaling Museum, Sharon, Massachusetts.)

Kendall Whaling Museum, for their help with the illustrations and text; Mark Sexton, staff photographer of the Peabody Museum of Salem, who took the photographs; and Mary Malloy, of the Peabody Museum, for editorial assistance. In addition to the ensuing, the standard documentation sources in marine painting were consulted: Archibald, *Dictionary of Sea Painters;* Benezit; Brewington, *Dictionary of Marine Artists;* Bryan; *Dictionaire de Biographie Français;* Havlice; Mallett; Thieme-Becker.

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At the Sign of the Quadrant— The Navigational Instrument Business in America to the Civil War

DEBORAH JEAN WARNER

THE first American instrument for celestial navigation on record is a backstaff 'Made by James Halsey for Thomas Swett 1676.' This type of instrument, used to determine latitude by observing the noon altitude of the sun, was also known as a Davis quadrant, having been invented by the English scientist-seaman John Davis in the 1590s. No other seventeenth-century American backstaffs are known, but at least eighteen signed examples of eighteenth-century American backstaffs are to be found. The dates range from 1740 to 1788. The list of makers includes James Ham, Jr., of Philadelphia, Anthony Lamb of New York, Benjamin King and William G. Hagger of Newport, James French of Providence, Thomas Greenough and William Williams of Boston, Benjamin King of Salem, and William Hart of Providence, as well as Clark Elliott of New London, whose surviving records suggest that he may have made over four hundred of these instruments.[1]

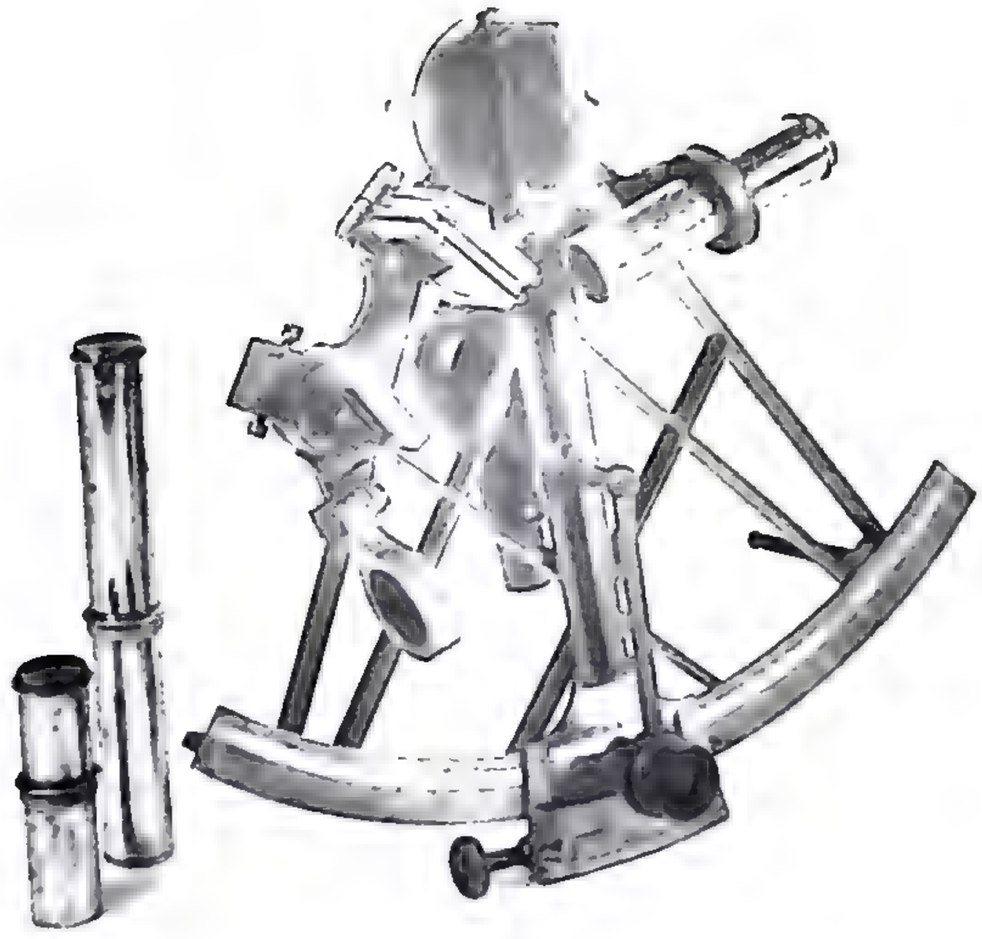
There is, of course, the question of whether these Americans actually made these instruments. In the nineteenth century a signature on an instrument was no guarantee of manufacture. Some eighteenth-century dealers may have affixed their names to instruments made elsewhere, but the practice was probably not widespread. Most American makers were skilled artisans, brought up in the trade, and living in communities that valued their skills. Although they sold many things they did not make, they would not have signed instruments indiscriminately. Even the form of the signature—a typical one reads 'Made by Wm. Guyse Hagger in Newport Rhode Island 1768 for Charles Edmonston'—supports the American attribution. A navigator who had an instrument made to order, and who expected it to read true, would not have patronized a maker with an unreliable signature. Some parts of the instruments could, of course, have been imported. The importance of suppliers was well established in Europe by the seventeenth century, and there is no reason to think that the situation would be radically different in colonial America. In some instances—such as the engravers who printed the paper cards used in wooden compasses—the supplier is clear. Usually, however, the suppliers were anonymous, and are thus difficult to know.

The reflecting quadrant, invented independently by Thomas Godfrey of Philadelphia and John Hadley of London in 1730-1731, eventually displaced the backstaff as the preferred instrument of celestial navigation. The ultimate success of the octant, however, has tended to obscure its slow beginnings.

'Made and sold by Joseph Halsey, jun. Hadley's New Invented Sea Quadrant or Octant, the best and exacted [*sic*] instrument for taking the Latitude or other Altitudes at sea, as ever yet invented."[2] This 1738 advertisement in the *Boston Gazette*, the earliest American announcement of the reflecting quadrant which has yet come to light, captures the problem facing early octant makers. The octant was more precise than the backstaff, but it was hard to convince navigators that such

1. M. V. Brewington, *The Peabody Museum Collection of Navigating Instruments* (Salem, Mass., 1963); M. V. Brewington, 'The Back Staff,' *The American Neptune* 21 (1961), 107-109; Howard M. Chapin, 'Davis Quadrants,' *Antiques* 12 (Nov. 1927), 397-99; Silvi A. Bedini, *Early American Scientific Instruments and Their Makers* (Washington, D.C., 1964); Silvio A. Bedini, *Thinkers and Tinkers* (New York, 1975).

2. Quoted in Bedini (1975), p. 122.



Sextant signed 'J. Allan Baltimore.' National Museum of American History, Gift of the College of the Holy Cross. (Courtesy of the National Museum of American History, Smithsonian Institution, Washington, D.C.)

precision was needed for latitude observations. The octant's greater precision was clearly needed for the lunar observations which would yield a celestial solution to the longitude problem. But the astronomical part of this problem had not yet been solved. Only after the 1753 publication of Tobias Mayer's lunar tables and a vigorous campaign led by Nevil Maskelyne, culminating with the *Nautical Almanac*, first published for the year 1767, did the octant begin to come into its own.

Godfrey's first octants were made by Anthony Lamb (1703-1784), the first American instrument maker who had apprenticed with a European master.[3] Lamb might have remained in London, then the center of the instrument trade, but in 1724 he ran afoul of the law and chose transportation over the gallows. In 1749 Lamb advertised 'The late invented and most curious instrument called an octant.' Four years later he was offering 'Godfrey's new invented quadrant, for taking the latitude or other altitudes at Sea.' Moreover, he was careful to specify that these instruments were 'compleatly made by Anthony Lamb.'

James Ham, also of New York, advertised 'the late instrument called an octant' in 1754. By 1764 Ham was in Philadelphia, trading 'at Hadley's Quadrant.' James Ham, Jr., continued the business, and his advertisement listing 'Hadley's and Davis's quadrants.' was illustrated with a cut of a reflecting quadrant.[4] Benjamin King of Newport announced that he 'makes and mends Hadley's and Davis's quadrants.'[5] William Hinton of New York was trading 'at Hadley's Quadrant' in 1772.[6] William Williams of Boston, whose 1774 advertisement showed a man using an octant, offered 'The largest Assortment of Hadley's and Davis's Quadrants ever in New England.' Williams did make some instruments, such as the backstaff mentioned above, but he was primarily a dealer. His 1770 advertisement carries a long list of items evidently imported from England, and then the claim, 'All Sorts of Mathematical Instruments are made and repaired by the above William Williams."[7]

This profusion of advertisements contrasts sharply with the paucity of actual instruments. Only four eighteenth-century American octants are known to have survived.[8] Apparently the oldest is that made by Benjamin King of Newport, based on an English design of 1748. The oldest dated American octant is that made by John Dupee of Boston in 1755. Benjamin Condy of Philadelphia, with whom Rev. John Ewing 'frequently conversed' about his suggestions for improving Godfrey's instrument, made two octants, one of which is dated 1763.

Most American instrument makers probably could not make an octant. The backstaff was a fairly simple instrument, composed entirely of wood. Octants, by contrast, although basically of wood, have brass fittings, glass mirrors and filters, and graduated scales of

3. Silvio A. Bedini, 'At the Sign of the Compass and Quadrant. The Life and Times of Anthony Lamb,' *Transactions, American Philosophical Society*, vol. 4, part 1 (1984).

4. Ad in *New York Mercury*, 27 May 1754, cited in Bedini (1964), p. 66; ad in *Pennsylvania Journal*, 29 March 1780, shown in Harrold E. Gillingham, 'Some Early Philadelphia Instrument Makers,' *The Pennsylvania Magazine of History and Biography* 51 (1927), 294-96.

5. Ad in *South Carolina Gazette*, 19 October 1765.

6. Ad in *New York Gazette*, 4 May 1772, cited in Bedini (1964), p. 66.

7. Ad in *The Salem Gazette*, 15 July 1774, shown in Bedini (1975); ad in *The Boston Gazette*, 12 March 1770, shown in Bedini (1964), p. 95.

8. For King's Caleb Smith type octant in the John Carter Brown Library see Bedini (1975); for the Dupee octant(s) at the Peabody Museum see Brewington (1963); for Condy's octant in the Historical Society of Pennsylvania see Gillingham.

either wood or ivory. Even if American artisans could have mastered the various materials in an octant, there was still the problem of the divided scale. This became increasingly difficult as the demands of navigation pushed the octant towards greater accuracy.

The typical backstaff has two graduated arcs—one 60° long graduated to single degrees, and one 30° long graduated to 10′ and read by diagonals to 1′ (or 2′ or 5′) of arc. As the radius of the 30° arc was around 24 inches, the scale was large and not difficult to produce.

Octants have only one graduated scale. The graduations on early octants were similar to those on backstaffs—10′ or 20′ read by diagonals to 1′ of arc. But because of the optical properties of the octant this arc, although extending over an eighth of a circle, was divided into 90°. Thus octant graduations, which seem the same as those on a backstaff, are in truth twice as fine. Early octants were large. A radius of 20 inches was not unusual. By the 1770s the radius had shrunk to around 15 inches, and verniers had replaced diagonals. By 1830 many octants were equipped with verniers reading to 30″ of arc.

If octants were beyond the skills of most American instrument makers, sextants eluded them all. Introduced in 1757, the sextant was essentially a reflecting quadrant extended to read angles up to 120°. Except for a very few early ones of wood, all sextants were made of metal. By the 1790s their arcs were graduated to 20′ and read by vernier to 10″ (or 15″ or 30″) of arc. Work of this nature was both difficult and time consuming. It could be done by one or two of the best instrument makers in London, but not on a scale sufficient to meet the needs of celestial navigation. The British solution was mechanization and industrialization.

In the early 1770s the English instrument maker Jesse Ramsden developed an engine for dividing the arcs on mathematical instruments. The Board of Longitude, charged with finding solutions to the longitude problem, immediately recognized Ramsden's engine as the key to mass production. Accordingly they bought the engine for £615, and contracted with Ramsden to divide arcs for other artisans at the rate of 3 shillings per octant, or 6 shillings for a brass sextant read by vernier to half minutes of arc. To expand production even further the Board published Ramsden's *Description of an Engine for Dividing Mathematical Instruments* in 1777, and his *Description of an Instrument for Dividing Straight Lines on Mathematical Instruments* in 1779.

When Ramsden began dividing arc for the trade the American revolution was underway. As Silvio Bedini has shown, the patriotism of many American instrument makers led them to take an active part in the war.[9] It is thus doubtful that they would have even tried to obtain arcs from Ramsden. Without access to a dividing engine they could not compete with English makers.

Although political independence was followed by rhetoric about economic independence, the seventy-five years following the revolution was a low point for the American navigational instrument business. To be sure, the number of instrument shops increased dramatically. Their proprietors identified themselves as 'instrument makers' and would have you believe that they were competitive with English artisans. Most, however, were primarily dealers, selling imported instruments. If they worked on instruments at all it was to repair them 'with neatness and dispatch,' as announced in the postscripts to almost all their advertisements. In 1792 Thomas Biggs, who had apprenticed with Benjamin Condy and then spent the war years in the service of his country, announced that he could furnish shippers with 'every necessary Instrument manufactured by himself,' and thus solicited their patronage for 'an American Manufacture of so great utility.' By 1815, however, Biggs was advertising navigational instruments 'regularly received from the first London Manufactories.'[10] A reporter in Boston in 1832 found the instrument trade 'not carried on' except to a 'trifling extent.' The four makers there were actually 'vendors of imported instruments,' keeping 'a man and a boy for the purpose of cleaning, repairing and adjusting sextants, compasses, &c.'[11]

Ironically, an instrument symbolic of America's navigational dependence on England announced the location of most of America's navigational instrument shops. Samuel Thaxter, who succeeded William Williams in 1792, took over his famous shop figure, the Little Admiral sighting with an octant. Philip Dorsey in Baltimore worked at 'the Sign of Hadley's Quadrant and Compass Card,' Edmund B. Blunt of Newbury-

9. Bedini (1975), part 3, 'Revolution.'

10. Ad in *Federal Gazette*, 14 September 1792, cited in Gillingham; ad in Edmund M. Blunt, *American Coast Pilot* (New York, 1815).

11. Louis McLane (ed.), *Documents Relative to the Manufactures in the United States* (Washington, D.C., 1833), vol. 1, p. 450.

port worked at 'the Sign of the Bible and Quadrant,' John Jayne of Salem worked at 'the Sign of Hadley's Quadrant,' and Frederick W. Lincoln, Jr., of Boston worked at 'the Sign of Mercury and Quadrant,' while the simple 'Sign of the Quadrant' identified the shops of Aaron Breed in Boston, William Davenport and later Charles and William Helffricht of Philadelphia, Ewin & Hearte of Baltimore, James Elford of Charleston, and Thomas Tennent and F. Tagliabue of San Francisco.

One of the first artisans in the United States who claimed to be 'a real Maker of Sextants, Quadrants, Telescopes, and Compasses' was the English immigrant, John Odell, who had worked 'for upwards of twenty years' in the London manufactory of Spencer, Browning & Rust before settling in Boston around 1820. Odell further claimed that he repaired instruments 'by his own hands'—'having no confidence in *Boys,* where lives and property are at stake.'[12] No instruments by Odell are now known.

Another New Englander who may have made instruments for celestial navigation was George W. Choate of New Bedford. In 1859 Choate and his partners were offering 'a complete assortment of reliable sextants, quadrants, compasses, &c. of their own manufacture, at wholesale and retail.'[13] No instruments by these men are now known.

The American Philosophical Society has a sextant signed 'Stancliffe, Maker, Philadelphia.' Benjamin Stancliffe (1781-1834) had worked for the renowned Edward Troughton in London before immigrating to the United States around 1816. He may well have had a dividing engine. One bearing his name was once in the collections of the Museum of Science and Industry in Chicago. His ability was recognized by the Franklin Institute which, in 1828, found an engineer's level made by Stancliffe and his apprentice, Edmund Draper, to be 'remarkable for the beauty of his workmanship, and the accuracy with which it is divided.'[14]

The National Museum of American History has a

Hadley quadrant (octant); American, 1755, made by John Dupee of Boston. (Photo by Mark Sexton, Peabody Museum of Salem.)

brass sextant signed 'J. Allan Baltimore,' apparently made by the John Allan listed as an 'optician and mathematical instrument maker' in Baltimore city directories from 1810 to 1819. This instrument is remarkably similar to another signed 'W. & S. Jones, 30 Holborn, London.' While J. Allan may have copied a W. & S. Jones sextant, I think it more likely that he sold a Jones instrument under his own name.

Men such as Odell, Choate, Stancliffe and Allan may actually have made some sextants, but they probably did not make very many. Not many sextants were even sold in the United States in those early years. In 1793 Samuel Thaxter had advertised 'A very neat Sextant, and a large assortment of Hadley's Quadrants, Davis's do.' Sporadic in the opening years of the nineteenth century, advertisements for sextants picked up in 1815, undoubtedly in response to resumption of trade following the embargo of the War of 1812. In Philadelphia Thomas Biggs, then trading at the 'Sign of the Sextant,'

12. Ad in Edmund M. Blunt, *American Coast Pilot* (New York, 1822).

13. Ad in *The New Bedford Directory*, 1859.

14. Robert P. Multhauf, *Catalogue of Instruments and Models in the Possession of the American Philosophical Society* (Philadelphia, 1961), p. 46; F. R. Hassler to R. B. Taney, 7 January 1834, quoted in Florian Cajori, *The Chequered Career of Ferdinand Rudolph Hassler* (Boston, 1929; Arno reprint, 1980), p. 179; *Journal, Franklin Institute*, ns 2 (1828), 408.

announced that he had 'always on hand Sextants of metal and ebony, with silver, brass, and ivory arches.' William Davenport did likewise.[15] To judge from advertisements, demand for sextants continued to grow, eventually becoming sufficiently strong to enable some Americans to gear up to manufacture them in quantity.

Sextants may have been admired for their elegance and precision. Their widespread adoption, however, depended on the widespread use of the lunar method of navigation. In the United States groundwork for the lunar method was laid slowly, over a period of about fifty years. A key figure in this process was Nathaniel Bowditch who, in an ocean voyage in the 1790s, taught a dozen men on his ship to 'take and work a lunar observation as well, for all practical purposes, as Sir Isaac Newton himself.'[16] More importantly, through his *New American Practical Navigator*, first published in 1802, Bowditch taught generations of Americans the fundamentals of the lunar method. By the 1820s navigation schools had been established in the various port cities. J. M. Elford in Charleston taught navigation 'in all its branches, including Astronomical and Lunar Observations.' M. Nash in New York taught 'Navigation, Lunar Observations, Maritime Surveying, and . . . the use of Mathematical and Nautical Instruments.'[17] During this same period charts were being improved so that a navigator who could determine the position of his ship would not run aground on unmarked or mismarked shoals. Thanks to such maker/dealers as E. & G. W. Blunt, Richard Patten, Robert L. Shaw and Alexander Megarey, American navigators had access to American editions of the British *Nautical Almanac*. The establishment of an *American Nautical Almanac*, authorized by Congress in 1849, may be said to have marked the official American acceptance of the lunar method.

As the port of New York grew in importance, the city of New York became the center of the navigational instrument business. E. & G. W. Blunt, proprietors from 1824 to 1866 of the largest nautical depot in New York, sold a wide variety of books and charts, as well as instruments for navigation and surveying.[18] The latter, they admitted openly in 1837, were from 'different manufacturers.' Indeed, one of the firm was now in England, 'superintending the manufacture of theodolites, transit instruments, etc.,' and would gladly include any custom work their customers desired.[19] For early nineteenth-century American artisans, advertisements are not a reliable indicator of production. E. & G. W. Blunt, however, advertised their wares fulsomely in *The American Coast Pilot* and their other publications. In 1833, for instance, they announced that they had recently built an astronomical observatory, equipped it with a fine transit instrument, and were ready and able to rate chronometers.[20] Thus the absence of Blunt advertisements of octants or sextants of their own manufacture must indicate that the several surviving octants signed 'E. & G. W. Blunt' must have been made in England.

In 1820 Richard Patten (1792-1865) advertised as 'manufacturer of mathematical instruments . . . equal to any in the City of London.' In another advertisement, which must date before his 1840 move to Washington, Patten claimed to be the 'only manufacturer of Sextans [*sic*] and Quadrants in New York.' His ad continued, 'All instruments in the above line made to order & warranted, being divided on an engine after the Plan of Ramsdens.'[21] No descriptions of Patten's shop survive, and so it is not clear whether Patten had a dividing engine of his own, or whether the arcs of his instruments were divided for him by someone who did. We do know, however, that unlike eighteenth-century American instrument makers, who worked alone or with an occasional apprentice, Patten employed a number of journeymen for fairly long periods of time. In 1830 John G. Brown (b. 1805) advertised as being 'well experienced in his profession, having been for many years attached to the establishment of Mr. Richard Patten, of New York.' In 1835 Edmund Brown (1800-c.1867) advertised as having been 'in the employment of Mr. R. Patten for the last 20 years with whom he served a regular apprenticeship.' His partner, Harvey W. Hunt, had 'also been in the same employment for the last 12 years.'[22]

15. Thaxter's ad in *The Columbia Centinel*, 22 May 1793, shown in Bedini (1964), p. 99; Biggs and Davenport ads in Blunt (1815).

16. Nathaniel Ingersoll Bowditch, *Memoir of Nathaniel Bowditch* (Cambridge, 1884).

17. Ads in Blunt (1822).

18. Harold L. Burstyn, *At the Sign of the Quadrant* (Mystic, Conn.: Marine Historical Association, 1957).

19. Ad in *American Railroad Journal* (1837).

20. Ad in E. & G. W. Blunt, *American Coast Pilot* (New York, 1833, and later), and in E. & G. W. Blunt, *Merchant and Seaman's Expeditious Measurer* (New York, 1837).

21. Ad in *Mercein's City Directory, New-York Register*, 1820; label shown in Roger Gerry, 'Richard Patten: Mathematical Instrument Maker,' *Antiques* 76 (July 1959), 57.

22. Brown & Heartte's ad in *Baltimore American*, 5 January 1830.

Whether or not Patten had a dividing engine of his own, Robert Ludlow Shaw (1813-1876) certainly had one 'of the celebrated Ramsden construction' by 1840, and was using it to manufacture instruments for navigation, surveying and astronomy. Shaw was a successor to John H. Wheeler, a 'Practical Workman.' Wheeler claimed to be a 'Real manufacturer of mathematical & optical instruments,' but I do not yet know if he actually made any octants or sextants. By 1841, however, Shaw had entered instruments in the fairs of the American Institute, taken home a gold medal, and heard the President of the Institute proclaim that 'it was no longer necessary to send to a foreign country to procure Nautical Instruments, as they could now have them made at home as good and at as low prices, as they could be had from abroad.'[23]

Shaw had the technical skills for navigational independence, but apparently not the necessary business skills. Although he remained in business for many years, he did not leave a wide trail of advertisements or accomplishments. No sextants by him are now known.

True navigational independence came soon after mid-century with the manufacture of sextants by strong American businesses. In 1857 E. & G. W. Blunt announced the completion of a dividing engine. After five years' labor they were now able to divide instruments for astronomy and navigation 'to a degree of precision which they will guarantee to be equal to the best of foreign make.' Now, they boasted, 'American ships may be navigated by American made instruments.'[24]

Stackpole & Brother, also of New York, acquired a dividing engine soon after going into business in 1851. By the Civil War they could claim proudly to be making 'nearly all the sextants required by our Navy.'[25] Given the nature of the Civil War, this boast may not have encompassed very many instruments. Symbolically, however, it recognized that America's navigational instrument business had finally come of age.

and Brown & Hunt's ad of 1 May 1835, shown in Charles E. Smart, *The Makers of Surveying Instruments in America Since 1700* (Troy, N.Y., 1962), pp. 18 and 20.

23. 'Catalogue of Nautical & Mathematical Instruments, Manufactured and Sold by R. L. Shaw,' in Shaw's edition of the *Nautical Almanac and Astronomical Ephemeris for the Year 1848* (New York, 1845); for Wheeler label at the Peabody Museum see Brewington (1963).

24. *Description of E. & G. W. Blunt's Dividing Engine* (New York, 1857); notice of the dividing engine in E. & G. W. Blunt, *American Coast Pilot* (New York, 1857).

25. Stackpole & Brother to Alexander D. Bache, 23 April 1863, in National Archives, RG 23.

A graduate of the University of Chicago and Harvard, Deborah Warner is curator, History of Physical Sciences at the National Museum of American History, Smithsonian Institution. She has written on the history of scientific apparatus, celestial cartography, and women in science and technology. She is also editor of Rittenhouse, *a new journal of the American scientific instrument enterprise.*

Meetings and Conferences, 1986-1987

7-11 January 1987. Society for Historical Archaeology and Conference on Underwater Archaeology. Hyatt Regency, Savannah, Georgia.

15-21 January 1987. International Symposium on Maritime History. Perth, Australia.

Spring 1987.* Annual Meeting of the Council of American Maritime Museums. San Francisco, California.

21 March 1987. Prints of Whales Symposium. Peabody Museum of Salem, Salem, Massachusetts.

24 April 1987. Annual Meeting of the United States Naval Institute. Monterey, California.

2-3 May 1987. The Second Annual Model Boat Show and Conference. (Also listed under Calendar of American Maritime Exhibits.) Erie Canal Museum, Syracuse, New York.

21-23 May 1987. North American Society of Oceanic History and Canadian Nautical Research Society Meeting. Kingston, Ontario. (Anyone interested in presenting a paper should send an abstract of their proposed paper, with their curriculum vitae, to Professor Barry M. Gouch, History Department, Wilfred Laurier University, Waterloo, Ontario N2L 3C5, Canada, by 1 January.)

6-7 June 1987. Annual Small Craft Weekend. Mystic Seaport Museum, Mystic, Connecticut.

16-18 July 1987. Society for Historians of the Early Republic. Temple University City Campus, Philadelphia, Pennsylvania.

3-9 August 1987. International Council of Museums Security Committee Meeting, Washington, D.C.

September 1987.* Naval History Symposium. United States Naval Academy, Annapolis, Maryland.

7-12 September 1987. Sixth International Congress of Maritime Museums. Amsterdam and Rotterdam, the Netherlands.

October 1987.* HINAS Annual Meeting. Philadelphia, Pennsylvania.

17 & 18 October 1987. Twelfth Annual Whaling Symposium. The Kendall Whaling Museum, Sharon, Massachusets.

7 & 8 November 1987. Southern New England Maritime History Symposium. Mystic Seaport Museum, Mystic, Connecticut.

*NOTE—Exact date not provided by this issue's production deadline.

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Special Exhibits, 1986-1987

American Maritime Museums

CALVERT MARINE MUSEUM
Solomons, Maryland

Fisherman's Trail. 1987.*

Seasons of Abundance, Seasons of Want: Making a Living from the Waters of the Patuxent. 1987 (Videotape program).

Watercolors, Oils and Sketches by Chesapeake Artist Louis Feuchter (1885-1957). 1987.

CAPE ANN HISTORICAL ASSOCIATION
Gloucester, Massachusetts

Paintings and Etchings by William Meyerowitz and Theresa Bernstein. 18 April through 18 July.

The Sculpture and Drawings of George Demetrios. 1 August-mid-November.

ERIE CANAL MUSEUM
Syracuse, New York

The Second Annual Model Boat Show and Conference. (Also listed under Calendar of Meetings and Conferences) 2 & 3 May 1987.

The Erie Canal and the Civil War. 1 June-31 December 1987.

THE KENDALL WHALING MUSEUM
Sharon, Massachusetts

Kongsberg Harpoon Cannon, 1936. August 1986, continuing.

Three Whales: Piscibius Monstro, Orco Northwest and Humpback Whale. October 1986, continuing.

Portrait Galleries:

Recent Acquisitions, 1985-1986; Ishmael's Picture Gallery—Whaling Scenes from *Moby-Dick*, Symposium 1986; and Whaling Photographs III. October 1986-September 1987.

Recent Acquisitions, 1986-1987; The Whales of China, 1730-1980, Symposium 1987; and Whaling Photographs IV. October 1987-September 1988.

Dutch Gallery:

Recently Conserved Paintings by Netherlandish Masters, 1620-1720. October 1987, continuing.

MANITOWOC MARITIME MUSEUM
Manitowoc, Wisconsin

Yachting and Recreational Boating. (First special exhibit of the new maritime museum, which opens late fall 1986.)

THE MARINER'S MUSEUM
Newport News, Virginia

The Immortal Memory: Admiral Horatio Nelson, 1785-1805. 26 September 1986-22 March 1987.

Christmas at Sea. 7 November 1986-18 January 1987.

Titanic. Continuing through 1987.

S.S. *United States*: Built to be the Best. Continuing through 1987.

Together to Win: Posters of the World Wars. Continuing through 1987.

Shipwrecks and Marine Disasters. 18 April-12 October 1987.

MYSTIC SEAPORT MUSEUM
Mystic, Connecticut

Shipwrecks and Marine Disasters. 18 April-12 October 1987.

One Hundred Images from the Life's Work of Photographers Morris and Stanley Rosenfeld. May 1986, continuing.

*NOTE—Throughout this listing, exact dates of openings and closings for some exhibits were not available by this issue's production deadline.

NATIONAL MUSEUM OF AMERICAN HISTORY
Smithsonian Institution, Washington, D.C.

G.A. 100: The Centenary of the Division of Graphic Arts. 16 May 1986, continuing.

New and Different: Home Interiors in 18th Century America. 19 August 1986-July 1987.

Engines of Change: The American Industrial Revolution, 1790-1860. 21 November 1986.

The Trees of Christmas. Mid-December 1986 through early January 1987.

Field to Factory: Afro-American Migration, 1915 to 1940. February 1987-February 1988.

American Documentary Photography. March 1987, continuing.

NATIONAL MUSEUM OF NATURAL HISTORY
Smithsonian Institution

Magnificent Voyagers: The U.S. Exploring Expedition, 1838-1842. (Traveling Exhibition.)

Indiana State Museum, Indianapolis, Indiana. 7 February-3 May 1987.

Los Angeles County Museum of Natural History, Los Angeles, California. 6 June-30 August 1987.

Washington State Historical Society, Tacoma, Washington. 3 October-27 December 1987.

NAVAL HISTORICAL CENTER
Washington Navy Yard, Washington, D.C.

The Forgotten Wars of the Early 19th Century. Fall 1986, continuing.

Underwater Exploration. Fall 1986, continuing.

The Sailor's Image from Jack Tars to Old Salts. Winter 1987.

PEABODY MUSEUM OF SALEM
Salem, Massachusetts

The Port of Salem: Her Ships, Captains and Merchants. Late 1986, continuing.

Maritime New England: Fishing, Coastal Trade, Deepwater Trade and Whaling. (Exact dates have not been set.)

PENOBSCOT MARINE MUSEUM
Searsport, Maine

Currier and Ives Navy. 15 May-15 July 1987.

Dog Watch and Liberty Days. 3 August-27 November 1987.

SAG HARBOR WHALING AND HISTORICAL MUSEUM
Sag Harbor, New York

The Scrimshaw and Ivory Toy Collection of Dorothy and Anthony Pintauro. 1986, continuing.

SUFFOLK MARINE MUSEUM
West Sayville, New York

Fourth Annual Old Timers Regatta. Mid-September 1987.

Special-Use Small Craft Used on Estates Bordering the Connetquot River. Summer 1986-late summer 1987.

UNITED STATES NAVAL ACADEMY MUSEUM
Annapolis, Maryland

The Ships of John Paul Jones. Paintings by William Gilkerson. Mid-September 1987-March 1988.

Book Reviews

KENNETH R. ANDREWS, *Trade, Plunder and Settlement: Maritime Enterprise and the Genesis of the British Empire, 1480-1630* (Cambridge: Cambridge University Press, 1984). 6" x 9", cloth, 394 pages, figures, bibliography, index. $49.50.

This ambitious book is the first general account of early English overseas expansion in four decades. Kenneth Andrews, whose previous works have focused on Elizabethan enterprise, especially privateering in the Caribbean, is well equipped to undertake such an important work, but even he must have worried about the breadth of the topic and the fragmentary nature of the sources. His product is intriguing, often pointing more to new avenues for research than summarizing past knowledge. Particularly valuable are the long introductory overview and the concluding 'reflections' which develop themes from the expeditions and episodes described in the narrative heart of the book.

Each of the fifteen narrative chapters focuses on a particular region and serves as a virtual chronology of English maritime enterprise as it shifted from one region to another. In virtually every case the primary object was trade, but if denied trade Englishmen resorted to plunder to seize a portion of the wealth monopolized by the Iberian nations. It was aborted schemes for plunder that fostered the first attempts at colonization. The main theme of the book is this intertwining of overseas trade, plunder, and colonization, with colonization clearly receiving the lowest priority.

Previous authors have tended to portray the era as one of an almost constant rise in English maritime and colonial power. Andrews' depiction is quite different. He shows that between 1480 and 1509 England took the lead in European reconnaissance of the northeastern coast of North America. Bristol merchants sent out several expeditions, but most of these were economic failures and for the next four decades England ceded leadership in exploring the area to France and Portugal. During the second half of the seventeenth century, English maritime enterprise shifted to the northeast and Russia with the object of developing markets for woolens in Muscovy and Persia. Initial successes were again followed by failures. Near the end of the century interest again shifted, this time to the Levant, and for the first time trade with a region beyond western Europe prospered. Success there led to new enterprises first in West Africa, then in the Caribbean, followed by the East, a return to the northeastern parts of America, and finally to the establishment of Gilbert's colony at Roanoke. None of these enterprises led to lasting trade relationships or empire, but they established a tradition of overseas exploration and trade which laid the basis for the British empire of the seventeenth and eighteenth centuries.

In retrospect it is clear that the eight decades between 1550 and 1630 were the transitional era during which England embarked on the acquisition of that seaborne empire. To contemporaries such a shift was far from evident. In 1630 only a visionary could have seen that a great empire would grow from a few tiny settlements in the West Indies, Virginia, Massachusetts, and the East. Seventeenth-century Englishmen were far more aware of the rise of London, the increase in commercial agriculture, and the expansion of the woolen cloth industry than they were of these colonies, yet the basis was laid. The crown gave only sporadic support to the merchants and other forces of overseas expansion and England's expansion of the early seventeenth century was made possible by the development of the joint stock company and a considerable pool of investment capital.

The entire process was complex and so too is this sweeping narrative. Roberts has skillfully drawn on forty years of scholarship to produce a synthesis which will stand as the standard work on the nascent English empire for as long as James Williamson's *Short History of British Expansion*, vol. 1: *The Old Colonial Empire* (1945) dominated the field.

JAMES C. BRADFORD

Texas A&M University

ARVID GÖTTLICHER, *Die Schiffe der Antike: Eine Einführung in die Archäologie der Wasserfahrzeuge* (Berlin: Gebr. Mann Verlag, 1985). 5½″ x 8″, paper, 156 pages, 91 illustrations. DM 31.

Arvid Göttlicher, the compiler of several most useful collections of ancient boat models, in this little handbook seeks to review the evidence that is available for the reconstruction of the various types of ancient craft, the difficulties we face in using it, and the results that have been achieved so far.

Since his space is limited and the topic broad, he moves quickly. He begins by summarizing the various forms of two-dimensional representations that have survived (reliefs, graffiti, paintings, impressions on seals and coins and gems) and the attempts that have been made to extract some concrete idea of the craft portrayed on them, from the working out of an elevation and plan view of a small ceremonial boat on a Kassite relief of the twelfth century B.C. (pages 29-31) to the determining of the dimensions and tonnage of a merchantman in a graffito on the wall of a Pompeian house (39-40). He evaluates descriptions found in literature, e.g., of a houseboat built for one of the Ptolemies (56-61; Göttlicher, momentarily forgetting his limited space, gives it in toto), of a big Roman grain carrier, of the craft that brought the Vatican obelisk to Rome (63-64). Descriptions and remains of ancient shipsheds are of great value (64-66) and so too are burial boats (66; the pace is so fast at this point that the boat found alongside Cheops' pyramid shares the page with the Viking galleys of Oseberg and Gokstad).

Göttlicher next turns to ancient wrecks, starting with a list of the various finds in the order of discovery, from a find at Corsica in 1777 to several made in 1982 (69-82; we can now add the recently discovered spectacular find at Kaş in Turkey). He reviews the criteria for dating wrecks (84-85), lays out the proper procedure for investigation and publication (86), and specifies the plans and drawings that are required (90-92), with appropriate credit to R. Steffy for his work on the Yassi Ada I wreck. He discusses (94-95, 99) the Punic wrecks at Marsala (but uncritically accepts their very doubtful identification as warships; cf. *The American Neptune* 25, 1985, 17-18). Surprisingly he says very little about the magnificently preserved and carefully excavated Madrague de Giens wreck. There follows a discussion of the use of traditional types of craft still to be found in various parts of the world to throw light on similar ancient types. The outrigger of the Adriatic *zòppolo*, for example, can be connected with that of an ancient trireme (115). A penultimate chapter surveys the various attempts at the reconstructing of ancient craft (the project to reconstruct a trireme [123], the reconstruction of the Kyrenia wreck [124-125], the reconstruction of a hide boat such as St. Brendan may have used [129-31]), and a final chapter summarizes the author's conclusions.

The illustrations, photographs and line-drawings, are profuse but, through the contrariness of the book designer, never placed near the relevant text.

LIONEL CASSON

New York University

JEAN METTAS, *Répertoire des Expeditions Negrières Francaises au XVIII. Seule Tome Second Ports Autre Que Nantes* (Société Francaise d'Histoire d'Outre Mer, Paris, France). 972 pages.

This large tome is a reference volume only. There is essentially no text or commentary. The format is simple and direct—all French ports other than Nantes are included. For example, Brest which begins in 1710 with a vessel named *La Francoise,* the name of the captain Louis Elias Stuthens, the date of departure and date of return, the number of Africans, etc. For any scholar interested in the slave trade relating to France this volume and its predecessor are essential items. They should grace all major research libraries and particularly those relating to maritime history.

S. W. JACKMAN

University of Victoria
Victoria, B.C.

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Dates in parentheses after the names of vessels indicate either the years of building or the reference. Dates indicating the year of the reference are printed in italic type: vessels having compound names are indexed under the initial letter of the *first* word. A list of vessels having compound names, arranged alphabetically by their last names, follows the index. This index was prepared by Geraldine M. Ayers of the Peabody Museum Staff.

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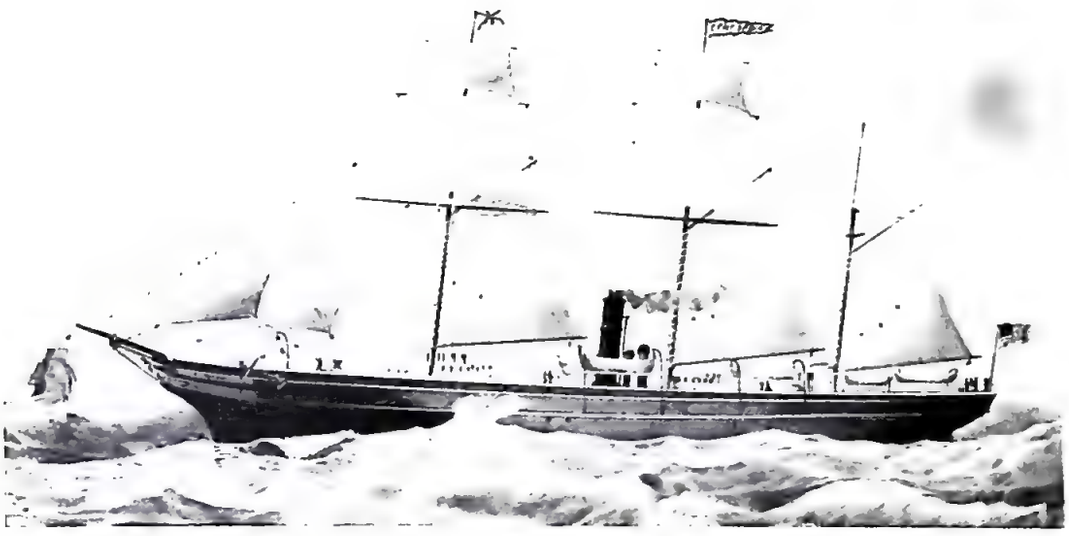

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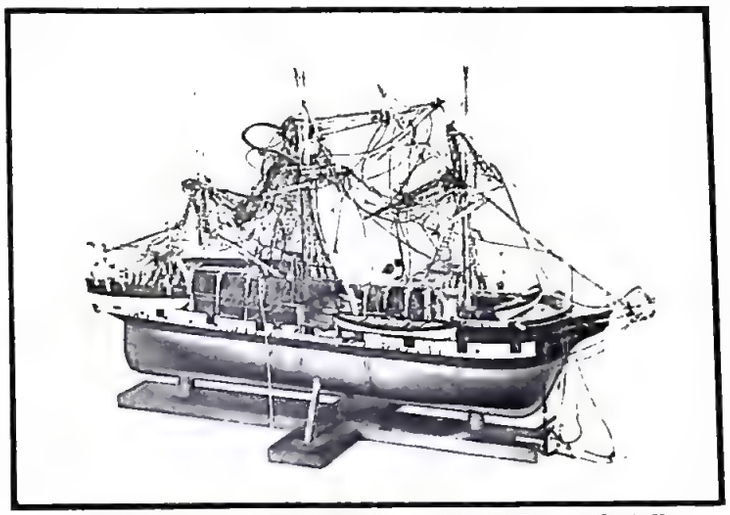

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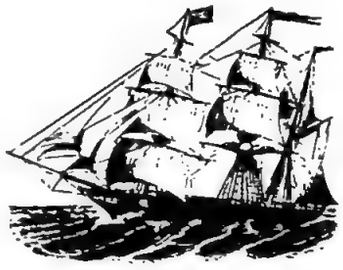

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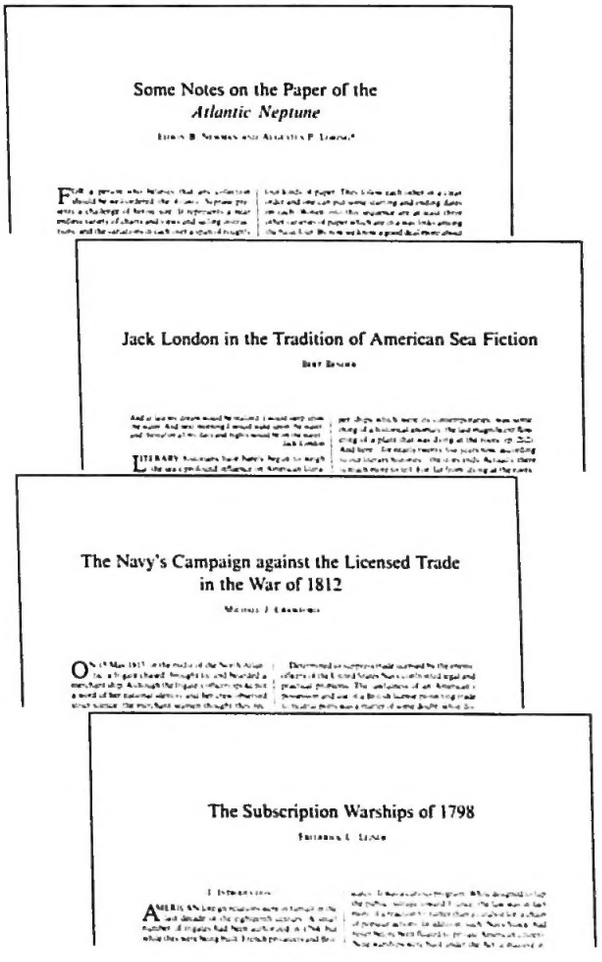
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